Virginia Title V Operating Permit

Until such time as this permit is reopened and revised, modified, revoked, terminated or expires, the permittee is authorized to operate in accordance with the terms and conditions contained herein. This permit is issued under the authority of Title 10.1, Chapter 13, §10.1-1322 of the Air Pollution Control Law of Virginia. This permit is issued consistent with the Administrative Process Act, and 9 VAC 5-80-50 through 9 VAC 5-80-300 of the State Air Pollution Control Board Regulations for the Control and Abatement of Air Pollution of the Commonwealth of Virginia.

Authorization to operate a Stationary Source of Air Pollution as described in this permit is hereby granted to:

Permittee Name:	Covanta Alexandria/Arlington, Inc.
Facility Name:	Covanta Alexandria/Arlington, Inc.
Facility Location:	5301 Eisenhower Ave. Alexandria, Virginia 22304
Registration Number:	71895
Permit Number:	NVRO71895

February 28, 2002
Effective Date

February 28, 2007
Expiration Date

Robert G. Burnley
Director, Department of Environmental Quality

Signature Date

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I. Facility Information

Permittee
Covanta Alexandria/Arlington, Inc.
5301 Eisenhower Ave.
Alexandria, VA 22304

Responsible Officials
Leon Brasowski
Vice President, Environmental Permitting
(973) 882-7285

George Ball-Llovera
General Manager
(703) 370-7722

Facility
Covanta Alexandria/Arlington, Inc.
5301 Eisenhower Ave.
Alexandria, VA 22304

Contact Person
George Ball-Llovera
General Manager
(703) 370-7722

AIRS Identification Number: 51-080-0139

Facility Description: SIC Code 4953 – Solid waste combustion primarily for non-hazardous waste volume reduction. Steam and electricity produced as byproducts.

II. Emission Units

Equipment to be operated consists of:

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description	PCD ID	Pollutant Controlled	Applicable Permit Date
Municipal Waste Combustor Equipment							
001-01	001	Faber Combustion Unit Model # unknown (Construction Date Feb. 1988)	51.65 million Btu/hr	---	---	---	February 4, 2002
001-02	001	Keeler/Dorr-Oliver municipal waste combustor with Martin stokers Model # MK 325 (Construction Date Feb. 1988)	121.8 million Btu/hr (Based on a higher heating value of 4500 Btu/lb for MSW)	Asea, Brown Boveri (ABB) Environmental Systems fabric filter Model # 266-14	01	Particulate Matter and Lead	February 4, 2002
				ABB Environmental Systems spray tower absorber Field Constructed	02	Sulfur Dioxide	
				Activated Carbon Injection System Field Constructed	03	Mercury	
				Covanta designed Aqueous Ammonia Furnace Injection Field Constructed	13	Nitrogen Oxides (as NO_2)	

002-01	002	Faber Combustion Unit Model # unknown (Construction Date Feb. 1988)	51.65 million Btu/hr	---	---	---	February 4, 2002
002-02	002	Keeler/Dorr-Oliver municipal waste combustor with Martin stokers Model # MK 325 (Construction Date Feb. 1988)	121.8 million Btu/hr (Based on a higher heating value of 4500 Btu/lb for MSW)	Asea, Brown Boveri (ABB) Environmental Systems fabric filter Model # 266-14 ABB Environmental Systems spray tower absorber Field Constructed Activated Carbon Injection System Field Constructed Covanta designed Aqueous Ammonia Furnace Injection Field Constructed	05 06 07 14	Particulate Matter and Lead Sulfur Dioxide Mercury Nitrogen Oxides (as NO_2)	February 4, 2002
003-01	003	Faber Combustion Unit Model # unknown (Construction Date Feb. 1988)	51.65 million Btu/hr	---	---		February 4, 2002
003-02	003	Keeler/Dorr-Oliver municipal waste combustor with Martin stokers Model # MK 325 (Construction Date Feb. 1988)	121.8 million Btu/hr (Based on a higher heating value of 4500 Btu/lb for MSW)	Asea, Brown Boveri (ABB) Environmental Systems fabric filter Model # 266-14 ABB Environmental Systems spray tower absorber Field Constructed	09 10	Particulate Matter and Lead Sulfur Dioxide	February 4, 2002

				Activated Carbon Injection System Field Constructed	11	Mercury	
				Covanta designed Aqueous Ammonia Furnace Injection Field Constructed	15	Nitrogen Oxides (as NO_2)	
Storage Silos							
004-01	004	Carbon Silo Storage Silo with pneumatic transfer of material (Construction Date Feb. 1988)	2010 ft^3/hr	Fabric Filter	16	Particulate Matter	February 4, 2002
005-01	005	Lime Silo Storage Silo with transfer of lime slurry (Construction Date Feb. 1988)	2548 ft^3/hr	Fabric Filter	17	Particulate Matter	February 4, 2002
Storage Tanks							
006-01	006	Underground Storage Tank for fuel oil (Construction Date Feb. 1988)	20,000 gallons	---	---	---	---

*The Size/Rated capacity is provided for informational purposes only, and is not an applicable requirement

III. Municipal Waste Combustor (MWC) Equipment Requirements – (Emission Units 001-01, 001-02, 002-01, 002-02, 003-01 and 003-02)

A. Limitations

1. Particulate matter emissions from the municipal waste combustors shall be controlled by the use of fabric filters.
   (9 VAC 5-80-110 and Condition 4 of 2/4/02 Permit)

2. Municipal waste, for the purpose of this permit, shall be defined as processable solid waste consisting of all materials customarily referred to as garbage and refuse and discarded materials, including non hazardous commercial or institutional waste, but excluding material which, because of its quantity or concentration of physical, chemical or infectious characteristics, may pose substantial hazard to human health or the environment. Number 2 (No. 2) fuel oil shall be used as the primary fuel during start-up conditions. Additionally, No. 2 fuel oil may be used for up to ten percent of the annual capacity heat input for each municipal waste combustor. Covanta Alexandria/Arlington, Inc. shall not accept hazardous waste for use in the municipal waste combustor.
   (9 VAC 5-80-110 and Condition 5 of 2/4/02 Permit)

3. The approved fuels for the municipal waste combustors are municipal waste and No. 2 fuel oil. A change in the fuels may require a permit to modify and operate.
   (9 VAC 5-80-110 and Condition 6 of 2/4/02 Permit)

4. The No. 2 fuel oil shall meet the ASTM specification D396-78 for No. 2 fuel oil. The maximum sulfur content per shipment shall not exceed 0.5 weight percent.
   (9 VAC 5-80-110, 40 CFR 60.42b(j) and Condition 6A of 2/4/02 Permit)

5. The firing of each municipal waste combustor with fuel oil shall not exceed an annual capacity factor of 10 percent. The annual capacity factor is determined by dividing the actual heat input to the municipal waste combustor unit during the calendar year from the combustion of No. 2 fuel oil by the potential heat input to the municipal waste combustor unit if the municipal waste combustor unit had been operated for 8,760 hours at the maximum design heat input capacity.
   (9 VAC 5-80-110, 9 VAC 5-50-410, 40 CFR 60.44b(c), 40 CFR 60.43b(d), 40 CFR 60.43b(e) and Condition 7 of 2/4/02 Permit)

6. Each municipal waste combustor train design includes a No. 2 fuel oil burner for use in maintaining appropriate municipal waste combustor temperatures.
   (9 VAC 5-80-110, 9 VAC 5-170-60 and Condition 8 of 2/4/02 Permit.)

7. Each of the municipal waste combustors shall not operate at a 4-hour average steam load level greater than 110 percent of the maximum demonstrated municipal waste

combustor unit load which is the maximum 4-hour arithmetic average unit load during four consecutive hours achieved during the most recent dioxin/furan test demonstrating compliance with the applicable limit for municipal waste combustor organics specified under 40 CFR 62.14101 [40 CFR 60.51b], except:

a. During the annual dioxin/furan performance test and the two weeks preceding the annual dioxin/furan performance test, the municipal waste combustor unit load limit is not applicable.

b. The municipal waste combustor unit load limit may be waived in accordance with permission granted by the board, for the purpose of evaluating system performance, testing new technology or control technologies, diagnostic testing, or related activities for the purpose of improving facility performance or advancing the state-of-the-art for controlling facility emissions.

(9 VAC 5-80-110, 40 CFR 62.14104(b) [40 CFR 60.53b(b)] and Condition 15 of 2/4/02 Permit)

8. The annual steam production for the facility shall not exceed 1.12 million tons on the basis of 3.34 pounds of steam produced per pound of municipal solid waste (MSW) processed, calculated monthly as the sum of each consecutive 12 month period. (9 VAC 5-170-160, 9 VAC 5-80-110, and Condition 14 of 2/4/02 Permit)

9. The 4-hour average temperature, measured at each particulate matter control device inlet, shall not exceed 17°C (30.6°F) above the maximum demonstrated particulate matter control device temperature which is the highest 4-hour arithmetic average flue gas temperature measured at the particulate matter control device inlet during the most recent dioxin/furan test demonstrating compliance with the applicable limit for municipal waste combustor organics specified under 40 CFR 62.14101 [40 CFR 60.51b], except:

a. During the annual dioxin/furan performance test and the two weeks preceding the annual dioxin/furan performance test, the particulate matter control device temperature limitations are not applicable.

b. The particulate matter control device temperature limits may be waived, in accordance with permission granted by the board, for the purpose of evaluating system performance, testing new technology or control technologies, diagnostic testing, or related activities for the purpose of improving facility performance or advancing the state-of-the-art for controlling facility emissions.

(9 VAC 5-80-110, 40 CFR 62.14104(b) [40 CFR 60.53b(c)] and Condition 16 of 2/4/02 Permit)

10. The permittee shall not emit particulate matter in excess of 0.18 grams per dry standard cubic meter (0.08 grains per dry standard cubic foot), corrected to 12% CO_2, from each municipal waste combustor.

    (9 VAC 5-80-110, 40 CFR 60.52 and Condition 13A of 4/2/02 Permit)

11. The following standards apply to the emissions from each municipal waste combustor:

    a. Particulate Matter: 27 milligrams per dry standard cubic meter, corrected to 7 percent oxygen.
    (9 VAC 5-80-110, 40 CFR 62.14103(a)(1) and Condition 9 of 2/4/02 Permit)

    b. Carbon Monoxide: 100 parts per million by volume, corrected to 7 percent oxygen, dry basis, calculated as an arithmetic average (4-hour block average). A 4-hour block average is defined as the average of all hourly emission concentrations when the affected facility is operating and combusting municipal solid waste measured over 4-hour periods of time from 12:00 midnight to 4 a.m., 4a.m. to 8 a.m., 8 a.m. to 12:00 noon, 12:00 noon to 4 p.m., 4p.m. to 8 p.m., and 8 p.m. to 12:00 midnight.
    (9 VAC 5-80-110, 40 CFR 62.14104(a), 40 CFR 62.14101 [40 CFR 60.51b], 40 CFR 62.14109(b) [40CFR60.58b(i)(1)] and Condition 9 of 2/4/02 Permit)

    c. Sulfur Dioxide: 29 parts per million by volume or 25 percent of the potential sulfur dioxide emission concentration (75 percent reduction by weight or volume), corrected to 7 percent oxygen, dry basis, whichever is less stringent. Compliance with this standard is based on a 24-hour daily geometric mean. A 24-hour daily average is defined as either the arithmetic or geometric mean (as specified) of all hourly emission concentrations when the affected facility is operating and combusting municipal solid waste measured over a 24-hour period between 12:00 midnight and the following midnight.
    (9 VAC 5-80-110, 40 CFR 62.14103(b)(1), 40 CFR 62.14101 [40 CFR 60.51b] and Condition 9 of 2/4/02 Permit)

    d. Nitrogen Oxides: 205 parts per million by volume corrected to 7 percent oxygen, dry basis, based on a 24-hour daily arithmetic average. A 24-hour daily average is defined as either the arithmetic or geometric mean (as specified) of all hourly emission concentrations when the affected facility is operating and combusting

municipal solid waste measured over a 24-hour period between 12:00 midnight and the following midnight.
(9 VAC 5-80-110, 40 CFR 62.14103(d), 40 CFR 62.14101 [40 CFR 60.51b] and Condition 9 of 2/4/02 Permit)

e. Hydrogen Chloride: 29 parts per million by volume or 5 percent of the potential hydrogen chloride emission concentration (95 percent reduction by weight or volume), corrected to 7 percent oxygen, dry basis, whichever is less stringent.
(9 VAC 5-80-110, 40 CFR 62.14103(b)(2) and Condition 9 of 2/4/02 Permit)

f. Cadmium: 0.040 milligrams per dry standard cubic meter, corrected to 7 percent oxygen.
(9 VAC 5-80-110, 40 CFR 62.14103(a)(2) and Condition 9 of 2/4/02 Permit)

g. Lead: 0.44 milligrams per dry standard cubic meter, corrected to 7 percent oxygen.
(9 VAC 5-80-110, 9 VAC 5-40-8000 and Condition 9 of 2/4/02 Permit)

h. Mercury**:** 0.080 milligrams per dry standard cubic meter or 15 percent of the potential mercury emission concentration (85 percent reduction by weight), corrected to 7 percent oxygen, whichever is less stringent.
(9 VAC 5-80-110, 40 CFR 62.14103(a)(3) and Condition 9 of 2/4/02 Permit)

i. Dioxin/Furan: 30 nanograms per dry standard cubic meter, expressed as total mass dioxins/furans, corrected to 7 percent oxygen.
(9 VAC 5-80-110, 40 CFR 62.14103(c)(2) and Condition 9 of 2/4/02 Permit)

12. Emissions from the operation of each municipal waste combustor shall not exceed the limits specified below:

	lb/MMBtu	lbs/hr	tons/yr
Particulate Matter	0.07		35.3
Particulate Matter 10 (PM_{10})	0.07		35.3
Sulfur Dioxide	0.14***	16.6***	69.0
Volatile Organic Compounds	0.006		3.0
Nitrogen Oxides (as NO_2)	0.55		277.0
Carbon Monoxide	0.56*	68.5*	8.5**
Municipal Waste Combustor Metals (measured as particulate matter & made up of the following:)	6.47×10^{-3}		3.42
Cadmium	2.7×10^{-4}		0.14
Lead	4.4×10^{-3}		2.32
Mercury	1.8×10^{-3}***		0.96

Municipal Waste Combustor Acid Gases (measured as the sum of SO_2 and HCl)	0.48***	58.3***	242
Hydrogen Chloride	0.34***		173.0
Municipal Waste Combustor Organics (measured as total tetra- through octa-chlorinated dibenzo-p-dioxins and dibenzofurans)	1.26×10^{-7}		6.7×10^{-5}
Total Dioxins and Furans	1.26×10^{-7}		6.7×10^{-5}
Beryllium	4.9×10^{-7}	6.0×10^{-5}	2.63×10^{-4}

*Maximum short-term carbon monoxide emission rate.
** Based on an average annual carbon monoxide emission rate of 0.096 lb/MMBtu, calculated monthly as the average of each consecutive 12 month period.
***For HCl, SO_2 and mercury, compliance will be demonstrated on a short-term basis by meeting the lb/MMBtu and lbs/hr emission limits specified in this condition or by the percent removal requirements specified in Condition # III.A.11.

Except for the lb/MMBtu and lb/hr HCl, SO_2 and mercury emission limits, the lb/MMBtu, lbs/hr and tons/yr emission limits in this condition may not be an indicator of compliance with the emission concentration and percent removal standards contained in Condition #III.A.11. Annual emissions shall be calculated monthly as the sum of each consecutive 12 month period unless specified otherwise.

(9 VAC 5-50-260, 9 VAC 5-50-270, 9 VAC 5-50-280, 9 VAC 5-50-180, 40 CFR 60.43b(d)(1), 40 CFR 61.32(a), 9 VAC 5-80-110, and Condition 10 of 2/4/02 Permit)

13. Total emissions from the operation of the municipal waste combustor plant shall not exceed the limits specified below:

Particulate Matter	106 tons/yr
PM-10	106 tons/yr
Sulfur Dioxide	206 tons/yr
Nitrogen Oxides (as NO_2)	830 tons/yr
Carbon Monoxide	145.45 tons/yr**
Volatile Organic Compounds	9.1 tons/yr
Municipal Waste Combustor Metals (measured as particulate matter & made up of the following:)	10.27 tons/yr
Cadmium	0.43 tons/yr

Lead	6.96 tons/yr
Mercury	2.88 tons/yr
Municipal Waste Combustor Acid Gases (measured as the sum of SO_2 and HCl)	723 tons/yr
Hydrogen Chloride	517 tons/yr
Municipal Waste Combustor Organics	
Total Dioxins and Furans	2.01×10^{-4} tons/yr
Beryllium	7.89×10^{-4}

** Based on an average annual carbon monoxide emission rate of 0.096 lb/MMBtu, calculated monthly as the average of each consecutive 12 month period.

The tons/yr emission limits may not be an indicator of compliance with the emission concentration standards contained in condition #III.A.11. Annual emissions shall be calculated monthly as the sum of each consecutive 12 month period unless specified otherwise.

(9 VAC 5-80-110, 9 VAC 5-50-260, 9 VAC 5-50-270, 9 VAC 5-50-280, 9 VAC 5-50-180 and Condition 11 of 2/4/02 Permit)

14. Visible emissions from any municipal waste combustor shall not cause or permit to be discharged into the atmosphere from any affected facility any gases that exhibit greater than 10 percent opacity (six-minute average).

    (9 VAC 5-80-110, 40 CFR62.14103(a)(1), 40 CFR 60.43b(f), 9 VAC 5-40-80, and Condition 12 of 2/4/02 Permit)

15. Standard for Fugitive Dust/Emissions:

    a. Covanta Alexandria/Arlington, Inc. shall not cause to be discharged to the atmosphere visible emissions of combustion ash from an ash conveying system (including conveyor transfer points) in excess of 5 percent of the observation period (i.e., 9 minutes per 3-hour period), as determined by Reference Method 22 observations as specified in 40 CFR 62.14106 [40 CFR 60.58b(k)], except as provided in sections b. and c. of this condition.

    b. The emission limit specified in section b. of this condition shall not cover visible emissions discharged inside buildings or enclosures of ash conveying systems; however, the emission limit specified in section a. of this condition shall cover visible emissions discharged to the atmosphere from buildings or enclosures of ash conveying systems.

    c. The provisions specified in section a. of this condition shall not apply during

maintenance and repair of ash conveying systems.

(9 VAC 5-80-110, 40 CFR 62.14106 [40 CFR 60.58b(k)] and Condition 13 of 2/4/02 Permit)

16. The provisions for startup, shutdown, and malfunction in parts a. and b. of this permit condition apply. The standards in 40 CFR 62 Subpart FFF apply at all times except during periods of startup, shutdown, or malfunction. Duration of startup, shutdown, or malfunction periods are limited to 3 hours per occurrence.

    a. The startup period commences when the municipal waste combustor unit begins the continuous burning of municipal solid waste and does not include any warmup period when the municipal waste combustor unit is combusting fossil fuel or other nonmunicipal solid waste fuel, and no municipal solid waste is being fed to the combustor.

    b. Continuous burning is the continuous, semicontinuous, or batch feeding of municipal solid waste for purposes of waste disposal, energy production, or providing heat to the combustion system in preparation for waste disposal or energy production. The use of municipal solid waste solely to provide thermal protection of the grate or hearth during the startup period when municipal solid waste is being fed to the grate is not considered to be continuous burning.

    (9 VAC 5-80-110, 40 CFR 62.14109(b) [40 CFR 60.58b(a)], 40 CFR 62.14109(b) [40 CFR 60.58b(a)(1)], and Condition 172 of 2/4/02 Permit)

17. Municipal waste combustor unit capacity shall be calculated based on 24 hours of operation at the maximum charging rate. The maximum charging rate shall be calculated based on the maximum design heat input capacity of the unit and a heating value of 10,500 kilojoules per kilogram (4,500 Btu/lb) for combustors firing municipal solid waste that is not refuse-derived fuel.
    (9 VAC 5-80-110, 40 CFR 62.14109(b) [40 CFR 60.58b(j)(1)(i)], and Condition 173 of 2/4/02 Permit)

18. Each chief facility operator and shift supervisor shall obtain and maintain a current provisional operator training certification from the American Society of Mechanical Engineers (QRO-1-1994).

    (9 VAC 5-80-110, 40 CFR 62.14105(a) and Condition 17 of 2/4/02 Permit)

19. Each chief facility operator and shift supervisor shall have (satisfactorily) completed a full certification exam with the American Society of Mechanical Engineers (QRO-1-1994) certification program.
    (9 VAC 5-80-110, 40 CFR 62.14105(b) and Condition 18 of 2/4/02 Permit)

20. Covanta Alexandria/Arlington, Inc. shall not allow the municipal waste combustor facility to be operated at any time unless one of the following persons is on duty and at Covanta Alexandria/Arlington, Inc.: A fully certified chief facility operator, a

provisionally certified chief facility operator who is scheduled to take the full certification exam no later than 12 months after the effective date of this subpart, a fully certified shift supervisor, or a provisionally certified shift supervisor who is scheduled to take the full certification exam no later than 12 months after the effective date of this subpart. If one of the persons who is responsible for the proper operation of the facility and has a license from the Board for Waste Management Facility Operators in the correct classification must leave Covanta Alexandria/Arlington, Inc. during their operating shift, a provisionally certified control room operator who is onsite at Covanta Alexandria/Arlington, Inc. may fulfill the requirements of this condition.
(9 VAC 5-80-110, 40 CFR 62.14105(c) and Condition 20 of 2/4/02 Permit).

21. All chief facility operators, shift supervisors, and control room operators must (satisfactorily) complete the EPA municipal waste combustor operator training course.

    (9 VAC 5-80-110, 40 CFR 62.14105(d)(1) and Condition 21 of 2/4/02 Permit)

22. Covanta Alexandria/Arlington, Inc. shall develop and update on a yearly basis a site-specific operating manual that shall, at a minimum, address the elements of municipal waste combustor unit operation specified in sections a. through l. of this condition.

    a. A summary of the applicable standards under this permit;
    b. A description of basic combustion theory applicable to a municipal waste combustor unit;
    c. Procedures for receiving, handling, and feeding municipal solid waste;
    d. Municipal waste combustor unit startup, shutdown, and malfunction procedures;
    e. Procedures for maintaining proper combustion air supply levels;
    f. Procedures for operating the municipal waste combustor unit within the standards established under this permit;
    g. Procedures for responding to periodic upset or off-specification conditions;
    h. Procedures for minimizing particulate matter carryover;
    i. Procedures for handling ash;
    j. Procedures for monitoring municipal waste combustor unit emissions;
    k. Reporting and recordkeeping procedures; and
    l. Approved Standby Emission Reduction Plan required under 9 VAC 5-70-50 for reducing nonattainment emissions during an Air Pollution Episode.

    The operations manual shall include a copy of this permit.

    (9 VAC 5-80-110, 40 CFR 62.14105(e), 9 VAC 5-170-160 and Conditions 22 and 23 of Permit 12/12/00)

23. Covanta Alexandria/Arlington, Inc. shall establish a training program to review the operating manual according to the schedule specified in sections a. and b. of this condition with each person who has responsibilities affecting the operation of the facility including, but not limited to, chief facility operators, shift supervisors, control room operators, ash handlers, maintenance personnel, and crane/load handlers.

    a. Each person shall undergo initial training no later than the date prior to the day the person assumes responsibilities affecting municipal waste combustor unit operation; or August 1, 2000, whichever is later.

    b. Each person shall repeat the initial training annually, within 12 months of the initial training required by section a. of this condition.

    (9 VAC 5-80-110, 40 CFR 62.14105(f) and Condition 24 of 2/4/02 Permit)

24. The operating manual shall be kept in a readily accessible location for all persons required to undergo training. The operating manual and records of training shall be available for inspection by the board upon request.
    (9 VAC 5-80-110, 40 CFR 62.14105(g) and Condition 25 of 2/4/02 Permit)

25. The permittee shall comply with all the applicable requirements of 40 CFR 60 Subpart Db and E; 40 CFR 61 Subpart C; and 40 CFR 62 Subpart FFF and the applicable general provisions of 40 CFR 60, 61 and 62.
    (9 VAC 5-80-110, 40 CFR 60 Subpart Db and E; 40 CFR 61 Subpart C; and 40 CFR 62 Subpart FFF and Subpart A of 40 CFR Parts 60, 61 and 62)

26. This is not a permit under the Resource Conservation and Recovery Act (RCRA). Questions on the applicability of RCRA can be directed to the Virginia Department of Environmental Quality – Waste Division.

    (9 VAC 5-80-110, 9 VAC 5-170-160 and Condition 178 of 2/4/02 Permit.)

27. **Facility or Control Equipment Malfunction - Hazardous Air Pollutant Processes** The processes listed below shall, upon request of the Department, shut down immediately if its emissions increase in any amount because of a bypass, malfunction, shutdown or failure of the process or its associated air pollution control equipment. The processes shall not return to operation until it and the associated air pollution control equipment are able to operate in the proper manner.

    a. Three municipal waste combustors (MWC's) each nominally rated at 121.8 million Btu per hour based on a higher heating value (HHV) of 4,500 Btu/lb for MSW.

    (9 VAC 5-80-110, 9 VAC 5-20-180 F 3 and Condition 182 of 2/4/02 Permit)

28. **Violation of Ambient Air Quality Standard** - The permittee shall, upon request of the DEQ, reduce the level of operation or shut down a facility, as necessary to avoid

violating any primary ambient air quality standard and shall not return to normal operation until such time as the ambient air quality standard will not be violated. (9 VAC 5-80-110, 9 VAC 5-20-180 I and Condition 183 of 2/4/02 Permit)

B. Monitoring

1. The permittee will monitor the differential pressure drop across each fabric filter on an ongoing basis.
   (9 VAC 5-80-110, 9 VAC 5-40-50 H and Condition 114 of 2/4/02 Permit)

2. The permittee shall record the daily charging rates and hours of operations of each of the municipal waste combustors.
   (9 VAC 5-80-110, 40 CFR 60.53 and Condition 115A of 2/4/02 Permit)

3. The procedures under 40 CFR 60.13 shall be followed for installation, evaluation, and operation of the continuous monitoring system for opacity. For facilities combusting municipal-type solid waste, the span value for a continuous monitoring system for measuring opacity shall be between 0 and 35 percent.
   (9 VAC 5-80-110, 40 CFR 60.48b and Condition 115B of 2/4/02 Permit)

4. The appropriate provisions of 40 CFR 60.48b are applicable to Covanta Alexandria/Arlington, Inc.
   (9 VAC 5-80-110, 40 CFR 60.48b and Condition 115C of 2/4/02 Permit)

5. Covanta Alexandria/Arlington, Inc. shall install, calibrate, maintain, and operate a continuous emission monitoring system and record the output of the system for measuring the oxygen or carbon dioxide content of the flue gas at each location where carbon monoxide, sulfur dioxide, or nitrogen oxides emissions are monitored and shall comply with the test procedures and test methods specified in sections a. through g. of this permit condition.

   a. The span value of the oxygen (or carbon dioxide) monitor shall be 25 percent oxygen (or carbon dioxide).

   b. All continuous emission monitors for oxygen or carbon dioxide shall be installed, evaluated, and operated in accordance with 40 CFR 60.13.

   c. All continuous emission monitors for oxygen and carbon dioxide shall conform to Performance Specification 3 in appendix B of 40 CFR 60 except for section 2.3 (relative accuracy requirement).

   d. The quality assurance procedures of appendix F of 40 CFR 60 except for section 5.1.1 (relative accuracy test audit) shall apply to the monitor.

   e. If carbon dioxide is selected for use in diluent corrections, the relationship between oxygen and carbon dioxide levels shall be established during the initial

performance test according to the procedures and methods specified in sections i. through iv. of this permit condition. This relationship may be reestablished during performance compliance tests.

i. The fuel factor equation in Reference Method 3B shall be used to determine the relationship between oxygen and carbon dioxide at a sampling location. Reference method 3, 3A, or 3B, as applicable, shall be used to determine the oxygen concentration at the same location as the carbon dioxide monitor.

ii. Samples shall be taken for at least 30 minutes in each hour.

iii. Each sample shall represent a 1-hour average.

iv. A minimum of three runs shall be performed.

f. The relationship between carbon dioxide and oxygen concentrations that is established in accordance with section f. of this permit condition shall be submitted to the board as part of the initial performance test report and, if applicable, as part of the annual test report if the relationship is reestablished during the annual performance test.

(9 VAC 5-80-110, 40 CFR 62.14109(b) [40 CFR 60.58b(b)] and Conditions 116 through 123 of 2/4/02 Permit)

6. The procedures specified in conditions #III.B.7 through #III.B.17 shall be used for determining compliance with the operating requirements under 40 CFR 62.14104(a). (9 VAC 5-80-110, 40 CFR 62.14109(b) [40 CFR 60.58b(i)] and Conditions 124 of 2/4/02 Permit)

7. Compliance with the carbon monoxide emission limits in 40 CFR 62.14104(a) shall be determined using a 4-hour block arithmetic average.
(9 VAC 5-80-110, 40 CFR 62.14109(b) [40 CFR 60.58b(i)(1)] and Conditions 125 of 2/4/02 Permit)

8. Covanta Alexandria/Arlington, Inc. shall install, calibrate, maintain, and operate a continuous emission monitoring system for measuring carbon monoxide at the combustor outlet and record the output of the system and shall follow the procedures and methods specified in sections a. and b. of this permit condition.

a. The continuous emission monitoring system shall be operated according to Performance Specification 4A in appendix B of 40 CFR 60.

b. During each relative accuracy test run of the continuous emission monitoring system required by Performance Specification 4A in appendix B of 40 CFR 60, carbon monoxide and oxygen (or carbon dioxide) data shall be collected concurrently (or within a 30- to 60-minute period) by both the continuous emission monitors and the test methods specified in sections i. and ii. of this permit condition.

i. For carbon monoxide, Reference Method 10, 10A, or 10B shall be used.

ii. For oxygen (or carbon dioxide), Reference Method 3, 3A, or 3B, as applicable, shall be used.

c. The span value of the continuous emission monitoring system shall be 125 percent of the maximum estimated hourly potential carbon monoxide emissions of the municipal waste combustor unit.

(9 VAC 5-80-110, 40 CFR 62.14109(b) [40 CFR 60.58b(i)(3)] and Conditions 126 of 2/4/02 Permit)

9. The 4-hour block arithmetic average specified in 40CFR62.14104(a) shall be calculated from 1-hour arithmetic averages expressed in parts per million by volume corrected to 7 percent oxygen (dry basis). The 1-hour arithmetic averages shall be calculated using the data points generated by the continuous emission monitoring system. At least two data points shall be used to calculate each 1-hour arithmetic average.

   (9 VAC 5-80-110, 40 CFR 62.14109(b) [40 CFR 60.58b(i)(4)] and Conditions 127 of 2/4/02 Permit)

10. Covanta Alexandria/Arlington, Inc. may request that compliance with the carbon monoxide emission limit be determined using carbon dioxide measurements corrected to an equivalent of 7 percent oxygen. The relationship between oxygen and carbon dioxide levels for Covanta Alexandria/Arlington, Inc. shall be established as specified in permit condition # III.B.5.f.

    (9 VAC 5-80-110, 40 CFR 62.14109(b) [40 CFR 60.58b(i)(5)] and Conditions 128 of 2/4/02 Permit)

11. The procedures specified in section a. through d. of this condition shall be used to determine compliance with load level requirements under 40 CFR 62.14104 [40 CFR 60.53b(b) and (c)].

    a. Covanta Alexandria/Arlington, Inc. with steam generation capability shall install, calibrate, maintain, and operate a steam flow meter or a feedwater flow meter; measure steam (or feedwater) flow in megagrams per hour (or kilopounds per hour) on a continuous basis; and record the output of the monitor. Steam (or feedwater) flow shall be calculated in 4-hour block arithmetic averages.

    b. The method included in the "American Society of Mechanical Engineers Power Test Codes: Test Code for Steam Generating Units, Power Test Code 4.1 -- 1964 (R1991)" section 4 shall be used for calculating the steam (or feedwater) flow required under section a. of this permit condition. The recommendations in "American Society of Mechanical Engineers Interim Supplement 19.5 on Instruments and Apparatus: Application, Part II of Fluid Meters, 6th edition

(1971)," chapter 4 shall be followed for design, construction, installation, calibration, and use of nozzles and orifices except as specified in section c. of this permit condition.

c. Measurement devices such as flow nozzles and orifices are not required to be recalibrated after they are installed.

d. All signal conversion elements associated with steam (or feedwater flow) measurements must be calibrated according to the manufacturer's instructions before each dioxin/furan performance test, and at least once per year.

(9 VAC 5-80-110, 40 CFR 62.14104(b) [40 CFR 60.53b(b) and (c)], 40 CFR 62.14109(b) [40 CFR 60.58b(i)(6)] and Conditions 129 of 2/4/02 Permit)

12. To determine compliance with the maximum particulate matter control device temperature requirements under 40 CFR 62.14104(b) [40 CFR 60.53b(c)], Covanta Alexandria/Arlington, Inc. shall install, calibrate, maintain, and operate a device for measuring on a continuous basis the temperature of the flue gas stream at the inlet to each particulate matter control device utilized by Covanta Alexandria/Arlington, Inc. Temperature shall be calculated in 4-hour block arithmetic averages.

    (9 VAC 5-80-110, 40 CFR 62.14109(b) [40 CFR 60.58b(i)(7)] and Conditions 130 of 2/4/02 Permit)

13. The maximum demonstrated municipal waste combustor unit load shall be determined during the initial performance test for dioxins/furans and each subsequent performance test during which compliance with the dioxin/furan emission limit specified in 40 CFR 62.14103(c)(2) is achieved. The maximum demonstrated municipal waste combustor unit load shall be the highest 4-hour arithmetic average load achieved during four consecutive hours during the most recent test during which compliance with the dioxin/furan emission limit was achieved.

    (9 VAC 5-80-110, 40 CFR 62.14109(b) [40 CFR 60.58b(i)(8)] and Conditions 131 of 2/4/02 Permit)

14. For each particulate matter control device employed at Covanta Alexandria/Arlington, Inc., the maximum demonstrated particulate matter control device temperature shall be determined during the initial performance test for dioxins/furans and each subsequent performance test during which compliance with the dioxin/furan emission limit specified in 40 CFR 62.14103(c)(2) is achieved. The maximum demonstrated particulate matter control device temperature shall be the highest 4-hour arithmetic average temperature achieved at the particulate matter control device inlet during four consecutive hours during the most recent test during which compliance with the dioxin/furan limit was achieved.

    (9 VAC 5-80-110, 40 CFR 62.14109(b) [40 CFR 60.58b(i)(9)] and Conditions 132 of 2/4/02 Permit)

15. At a minimum, valid continuous emission monitoring system hourly averages shall be obtained as specified in sections a. and b. of this condition for 75 percent of the operating hours per day for 90 percent of the operating days per calendar quarter that Covanta Alexandria/Arlington, Inc. is combusting municipal solid waste.

    a. At least two data points per hour shall be used to calculate each 1-hour arithmetic average.

    b. At a minimum, each carbon monoxide 1-hour arithmetic average shall be corrected to 7 percent oxygen on an hourly basis using the 1-hour arithmetic average of the oxygen (or carbon dioxide) continuous emission monitoring system data.

    (9 VAC 5-80-110, 40 CFR 62.14109(b) [40 CFR 60.58b(i)(10)] and Conditions 133 of 2/4/02 Permit)

16. All valid continuous emission monitoring system data must be used in calculating the parameters specified under this section even if the minimum data requirements of permit condition # III.B.15 are not met. When carbon monoxide continuous emission data are not obtained because of continuous emission monitoring system breakdowns, repairs, calibration checks, and zero and span adjustments, emissions data shall be obtained using other monitoring systems as approved by the board or Reference Method 10 to provide, as necessary, the minimum valid emission data.
    (9 VAC 5-80-110, 40 CFR 62.14109(b) [40 CFR 60.58b(i)(11)] and Conditions 134 of 2/4/02 Permit)

17. Quarterly accuracy determinations and daily calibration drift tests for the carbon monoxide continuous emission monitoring system shall be performed in accordance with procedure 1 in appendix F of 40 CFR 60.
    (9 VAC 5-80-110, 40 CFR 62.14109(b) [40 CFR 60.58b(i)(12)] and Conditions 135 of 2/4/02 Permit)

C. Recordkeeping

1. Covanta Alexandria/Arlington, Inc. shall maintain records of emission data and operating parameters as necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the Air Compliance Manager, Northern Virginia Regional Office. These records shall include, but are not limited to the information specified in permit conditions #III.C.2 through #III.C.17, as applicable, for each affected facility. These records shall be on-site for inspection by the DEQ for a period of at least 5 years.
   (9 VAC 5-80-110, 40 CFR62.14109(a) [40 CFR 60.59b(d)], 9 VAC 5-40-50 and Condition 137 of 2/4/02 Permit)

2. Covanta Alexandria/Arlington, Inc. shall maintain the calendar date of each record. (9 VAC 5-80-110, 40 CFR62.14109(a) [40 CFR 60.59b(d)(1)] and Condition 138 of 2/4/02 Permit)

3. The emission concentrations and parameters measured using continuous monitoring systems as specified under this condition.

    a. The measurements specified in a(1) through a(4) of this condition shall be recorded and be available for submittal to the board or review onsite by an inspector.

        (1) All 6-minute average opacity levels as specified under 40 CFR 62.14109(a) [40 CFR 60.58b(c)].

        (2) All 1-hour average sulfur dioxide emission concentrations as specified under 40 CFR 62.14109(a) [40 CFR 60.58b(e)].

        (3) All 1-hour average nitrogen oxides emission concentrations as specified under 40 CFR 62.14109(a) [40 CFR 60.58b(h)].

        (4) All 1-hour average carbon monoxide emission concentrations, municipal waste combustor unit load measurements, and particulate matter control device inlet temperatures as specified under 40 CFR 62.14109(a) [40 CFR 60.58b(i)].

    b. The average concentrations and percent reductions, as applicable, specified in permit conditions #III.C.3.b.(1) through #III.C.3.b.(4) shall be computed and recorded, and shall be available for submittal to the board or review on-site by an inspector.

        (1) All 24-hour daily geometric average sulfur dioxide emission concentrations and all 24-hour daily geometric average percent reductions in sulfur dioxide emissions as specified under 40 CFR 62.14109(a) [40 CFR 60.58b(e)].

        (2) All 24-hour daily arithmetic average nitrogen oxides emission concentrations as specified under 40 CFR 62.14109(a) [40 CFR 60.58b(h)].

        (3) All 4-hour block or 24-hour daily arithmetic average carbon monoxide emission concentrations, as applicable, as specified under 40 CFR 62.14109(a) [40 CFR 60.58b(i)].

        (4) All 4-hour block arithmetic average municipal waste combustor unit load levels and particulate matter control device inlet temperatures as specified under 40 CFR 62.14109(a) [40 CFR 60.58b(i)].

(9 VAC 5-80-110, 40 CFR62.14109(a) [40 CFR 60.59b(d)(2)] and Condition 139 of 2/4/02 Permit)

4. Identification of the calendar dates when any of the average emission concentrations, percent reductions, or operating parameters recorded under b (1) through b (4) of permit condition # III.C.3, or the opacity levels recorded under a (1) of permit condition # III.C.3 are above the applicable limits, with reasons for such exceedances and a description of corrective actions taken.
(9 VAC 5-80-110, 40 CFR62.14109 [40 CFR 60.59b(d)(3)] and Condition 140 of 2/4/02 Permit)

5. For affected facilities that apply activated carbon for mercury control, the records specified in sections a. through d. of this condition.

   a. The average carbon mass feed rate (in kilograms per hour or pounds per hour) estimated as required under 40 CFR 62.14109(a) [40 CFR 60.58b(m)(1)(i)] during all annual performance tests for mercury emissions, with supporting calculations. The average carbon mass feed rate shall be based on a 6-hour average or the total sampling time of the most recent annual performance test for mercury.

   b. The average carbon mass feed rate (in kilograms per hour or pounds per hour) estimated for each hour of operation as required under 40 CFR 62.14109(a) [40 CFR 60.58b(m)(1)(ii)], with supporting calculations. The average carbon mass feed rate shall be based on a 6-hour average or the total sampling time of the most recent annual performance test for mercury.

   c. The total carbon usage for each calendar quarter estimated as specified by 40 CFR 62.14109(a) [40 CFR 60.58b(m)(3)], with supporting calculations.

   d. Carbon injection system operating parameter data for the parameter(s) that are the primary indicator(s) of carbon feed rate (e.g., gravimetric feeder).

   (9 VAC 5-80-110, 40 CFR62.14109(a) [40 CFR 60.59b(d)(4)] and Condition 141 of 2/4/02 Permit)

6. Identification of the calendar dates for which the minimum number of hours of any of the data specified in sections a. through e. of this condition have not been obtained including reasons for not obtaining sufficient data and a description of corrective actions taken.

   a. Sulfur dioxide emissions data;

   b. Nitrogen oxides emissions data;

   c. Carbon monoxide emissions data;

d. Municipal waste combustor unit load data; and

e. Particulate matter control device temperature data.

(9 VAC 5-80-110, 40 CFR62.14109(a) [40 CFR 60.59b(d)(6)] and Condition 142 of 2/4/02 Permit)

7. Identification of each occurrence that sulfur dioxide emissions data, nitrogen oxides emissions data, or operational data (i.e., carbon monoxide emissions, unit load, and particulate matter control device temperature) have been excluded from the calculation

of average emission concentrations or parameters, and the reasons for excluding the data.
(9 VAC 5-80-110, 40 CFR62.14109(a) [40 CFR 60.59b(d)(7)] and Condition 143 of 2/4/02 Permit)

8. The results of daily drift tests and quarterly accuracy determinations for sulfur dioxide, nitrogen oxides (large municipal waste combustors only), and carbon monoxide continuous emission monitoring systems, as required under appendix F of 40 CFR 60, procedure 1.
(9 VAC 5-80-110, 40 CFR62.14109(a) [40 CFR 60.59b(d)(8)] and Condition 144 of 2/4/02 Permit)

9. The test reports documenting the results of all annual performance tests listed in sections a. and b. of this permit condition shall be recorded along with supporting calculations.

   a. The results of all annual performance tests conducted to determine compliance with the particulate matter, opacity, cadmium, lead, mercury, dioxins/furans, hydrogen chloride, and fugitive ash emission limits.

   b. For all dioxin/furan performance tests recorded under section a. of this permit condition, the maximum demonstrated municipal waste combustor unit load and maximum demonstrated particulate matter control device temperature (for each particulate matter control device).

   (9 VAC 5-80-110, 40 CFR62.14109(a) [40 CFR 60.59b(d)(9)] and Condition 145 of 2/4/02 Permit)

10. The records specified in sections a. through c. of this condition.

    a. Records showing the names of the municipal waste combustor chief facility operator, shift supervisors, and control room operators who have been provisionally certified by the American Society of Mechanical Engineers or an equivalent board-approved certification program as required by 40 CFR62.14109 [40 CFR

60.54b(a)] including the dates of initial and renewal certifications and documentation of current certification.

b. Records showing the names of the municipal waste combustor chief facility operator, shift supervisors, and control room operators who have been fully certified by the American Society of Mechanical Engineers or an equivalent board-approved certification program as required by 40 CFR62.14109(a) [40 CFR 60.54b(b)] including the dates of initial and renewal certifications and documentation of current certification.

c. Records showing the names of the municipal waste combustor chief facility operator, shift supervisors, and control room operators who have completed the EPA municipal waste combustor operator training course or a board-approved equivalent course as required by 40 CFR62.14109(a) [40 CFR 60.54b(d)] including documentation of training completion.

(9 VAC 5-80-110, 40 CFR62.14109(a) [40 CFR 60.59b(d)(12)] and Condition 146 of 2/4/02 Permit)

11. Records showing the names of persons who have completed a review of the operating manual as required by 40 CFR62.14109(a) [40 CFR 60.54b(f)] including the date of the initial review and subsequent annual reviews.
(9 VAC 5-80-110, 40 CFR62.14109(a) [40 CFR 60.59b(d)(13)] and Condition 147 of 2/4/02 Permit)

12. For affected facilities that apply activated carbon for mercury control, identification of the calendar dates when the average carbon mass feed rates recorded under permit condition # III.C.5.b were less than the hourly carbon feed rates estimated during performance tests for mercury emissions and recorded under permit conditions #III.C.5.a, respectively, with reasons for such feed rates and a description of corrective actions taken.
(9 VAC 5-80-110, 40 CFR62.14109(a) [40 CFR 60.59b(d)(14)] and Condition 148 of 2/4/02 Permit)

13. Since Covanta Alexandria/Arlington, Inc. applies activated carbon for mercury control, identification of the calendar dates when the carbon injection system operating parameter(s) that are the primary indicator(s) of carbon mass feed rate (e.g. gravimetric feed rate) recorded under permit condition # III.C.5.d are below the level(s) estimated during the performance tests as specified in 40 CFR62.14109(a) [40 CFR 60.58b(m)(1)(i) and 40 CFR 60.58b(m)(1)(ii)], with reasons for such occurrences and a description of corrective actions taken.
(9 VAC 5-80-110, 40 CFR62.14109(a) [40 CFR 60.59b(d)(15)] and Condition 149 of 2/4/02 Permit)

14. All records specified under permit conditions #III.C.2 through #III.C.13 shall be maintained onsite in either paper copy or computer-readable format, unless an alternative format is approved by the board.
    (9 VAC 5-80-110, 40 CFR62.14109(a) [40 CFR 60.59b(k)] and Condition 168 of 2/4/02 Permit)

15. Records showing the amount of No. 2 fuel oil used as auxiliary fuel in each of the furnace/municipal waste combustors.
    (9 VAC 5-80-110, 9 VAC 5-50-50, 9 VAC 5-80-1700 and Condition 150 of 2/4/02 Permit)

16. The continuous emission monitor system records shall be annotated to identify the municipal waste combustor train, dates, light-off and securing times, and average firing rates.
    (9 VAC 5-80-110, 9 VAC 5-50-50 and Condition 151 of 2/4/02 Permit)

17. The permittee shall maintain records of the occurrence and duration of any startup, shutdown or malfunction in the operation of the municipal waste combustors; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative.
    (9 VAC 5-80-110, 40 CFR 60.7(b) and 9 VAC 5-40-50B)

18. The appropriate recordkeeping provisions of 40 CFR 60.49b are applicable to Covanta Alexandria/Arlington, Inc. The content and format of such records shall be arranged with the Air Compliance Manager, Northern Virginia Regional Office. These records shall be available onsite for inspection by the DEQ and shall be current for the most recent five (5) years.
    (9 VAC 5-80-110, 40 CFR 60.49b and 9 VAC 5-40-50)

19. The permittee shall maintain records of the daily charging rates and hours of operation of each of the municipal waste combustors. The content and format of such records shall be arranged with the Air Compliance Manager, Northern Virginia Regional Office. These records shall be available onsite for inspection by the DEQ and shall be current for the most recent five (5) years.
    (9 VAC 5-80-110, 40 CFR 60.53 and 9 VAC 5-40-50)

D. Testing

1. The permitted facility shall be constructed so as to allow for emissions testing at any time using appropriate methods. This includes constructing the facility such that volumetric flow rates and pollutant emission rates can be accurately determined by applicable test methods and providing stack or duct that is free from cyclonic flow. Test ports shall be provided when requested in accordance with the applicable performance specification (reference 40 CFR Part 60, Appendix B).
(9 VAC 5-80-110, 9 VAC 5-50-30F and Condition 177 of 2/4/02 Permit)

2. If testing is conducted in addition to the monitoring specified in this permit, the permittee shall use the following methods in accordance with procedures approved by the DEQ as follows:

Pollutant	Test Method (40 CFR Part 60, Appendix A)
VOC	EPA Methods 18, 25, 25a
NO_x	EPA Method 19
SO_2	EPA Method 19
CO	EPA Methods 10, 10a, 10b
PM/PM-10	EPA Method 5
Visible Emission	EPA Method 9
Fugitive Ash	EPA Method 22
Dioxin/Furan	EPA Method 23
Hydrogen Chloride	EPA Methods 26, 26a
Cadmium	EPA Method 29
Lead	EPA Method 29
Mercury	EPA Method 29
Beryllium	EPA Method 29

Alternative methods as approved by the DEQ on a case-by-case basis may be used. Test methods shall be performed under the direction of persons whose qualifications are acceptable to the DEQ.

(9 VAC 5-80-110, 9 VAC 5-40-30A and 9 VAC 5-40-30B)

3. The appropriate provisions of 40 CFR 60.46b are applicable to Covanta Alexandria/Arlington, Inc.
(9 VAC 5-80-110 and 40 CFR 60.46b)

4. The permittee shall determine compliance with the particulate matter standard in 40 CFR 60.52 using the procedures and reference methods required in 40 CFR 60.54.
(9 VAC 5-80-110 and 40 CFR 60.54)

Particulate Matter

5. The procedures and test methods specified in conditions #III.D.6 through #III.D.14 of this section shall be used to determine compliance with the emission limits for particulate matter and opacity under 40 CFR 62.14103(a)(1).
(9 VAC 5-80-110, 40 CFR 62.14109(b) [40 CFR 60.58b(c)] and Condition 28 of 2/4/02 Permit)

6. Reference Method 1 shall be used to select sampling site and number of traverse points.
(9 VAC 5-80-110, 40 CFR 62.14109(b) [40 CFR 60.58b(c)(1)] and Condition 29 of 2/4/02 Permit)

7. Reference Method 3, 3A, or 3B, as applicable, shall be used for gas analysis.
(9 VAC 5-80-110, 40 CFR 62.14109(b) [40 CFR 60.58b(c)(2)] and Condition 30 of 2/4/02 Permit)

8. Reference Method 5 shall be used for determining compliance with the particulate matter emission limit contained in condition #III.A.11. The minimum sample volume shall be 1.7 cubic meters. The probe and filter holder heating systems in the sample train shall be set to provide a gas temperature no greater than 160 +/- 14^0C. An oxygen or carbon dioxide measurement shall be obtained simultaneously with each Reference Method 5 run.
(9 VAC 5-80-110, 40 CFR 62.14109(b) [40 CFR 60.58b(c)(3)] and Condition 31 of 2/4/02 Permit)

9. Covanta Alexandria/Arlington, Inc. may request that compliance with the particulate matter emission limit be determined using carbon dioxide measurements corrected to an equivalent of 7 percent oxygen. The relationship between oxygen and carbon dioxide levels for Covanta Alexandria/Arlington, Inc. shall be established as specified in 40 CFR 62.14109(b) [40 CFR 60.58b(b)(6)].
(9 VAC 5-80-110, 40 CFR 62.14109(b) [40 CFR 60.58b(c)(4)] and Condition 32 of 2/4/02 Permit)

10. All performance tests shall consist of three test runs. The average of the particulate matter emission concentrations from the three test runs, one of which shall include normal sootblowing operations, shall be used to determine compliance.
(9 VAC 5-80-110, 40 CFR 62.14109(b) [40 CFR 60.58b(c)(5)], 9 VAC 5-40-30E, 40 CFR 60.8 and Condition 33 of 2/4/02 Permit)

Opacity

11. In accordance with conditions #III.D.14, Reference Method 9 shall be used for determining compliance with the opacity limit except as provided in 40 CFR 60.11(e).
(9 VAC 5-80-110, 40 CFR 62.14109(b) [40 CFR 60.58b(c)(6)] and Condition 34 of 2/4/02 Permit)

12. Covanta Alexandria/Arlington, Inc. shall install, calibrate, maintain, and operate a continuous opacity monitoring system for measuring opacity and shall follow the methods and procedures specified in sections a. through c. of this condition.

    a. The output of the continuous opacity monitoring system shall be recorded on a 6-minute average basis.

    b. The continuous opacity monitoring system shall be installed, evaluated, and operated in accordance with 40 CFR 60.13 and 9 VAC 5-40-41.

    c. The continuous opacity monitoring system shall conform to Performance

Specification 1 in appendix B of 40 CFR 60.

(9 VAC 5-80-110, 40 CFR 62.14109(b) [40 CFR 60.58b(c)(8)] and Condition 36 of 2/4/02 Permit)

13. Following the date that the initial performance test for particulate matter is completed or is required to be completed under 40 CFR 60.8, Covanta Alexandria/Arlington, Inc. shall conduct a performance test for particulate matter on an annual basis (no more than 12 calendar months following the previous performance test).
(9 VAC 5-80-110, 40 CFR 62.14109(b) [40 CFR 60.58b(c)(9)] and Condition 37 of 2/4/02 Permit)

14. Following the date that the initial performance test for opacity is completed or is required to be completed under 40 CFR 60.8, Covanta Alexandria/Arlington, Inc. shall conduct a performance test for opacity on an annual basis (no more than 12 calendar months following the previous performance test) using the test method specified in permit condition #III.D.11.
(9 VAC 5-80-110, 40 CFR 62.14109(b) [40 CFR 60.58b(c)(11)] and Condition 38 of 2/4/02 Permit)

Cadmium and Lead

15. The procedures and test methods specified in conditions #III.D.16 and #III.D.32 of this permit shall be used to determine compliance with the emission limits for cadmium, lead, and mercury under 40 CFR 62.14103(a)(2) and 40 CFR 62.14103(a)(3).
(9 VAC 5-80-110, 40 CFR 62.14109(b) [40 CFR 60.58b(d)] and Condition 39 of 2/4/02 Permit)

16. The procedures and test methods specified in conditions #III.D.17 through #III.D.22 of this permit shall be used to determine compliance with the emission limits for cadmium and lead under 40 CFR 62.14103(a)(2).
(9 VAC 5-80-110, 40 CFR 62.14109(b) [40 CFR 60.58b(d)(1)] and Condition 40 of 2/4/02 Permit)

17. Reference Method 1 shall be used for determining the location and number of sampling points.
(9 VAC 5-80-110, 40 CFR 62.14109(b) [40 CFR 60.58b(d)(1)(i)] and Condition 41 of 2/4/02 Permit)

18. Reference Method 3, 3A, or 3B, as applicable, shall be used for flue gas analysis.
(9 VAC 5-80-110, 40 CFR 62.14109(b) [40 CFR 60.58b(d)(1)(ii)] and Condition 42 of 2/4/02 Permit)

19. Reference Method 29 shall be used for determining compliance with the cadmium and lead emission limits. An oxygen or carbon dioxide measurement shall be obtained simultaneously with each Reference Method 29 test run for cadmium and

lead.
(9 VAC 5-80-110, 40 CFR 62.14109(b) [40 CFR 60.58b(d)(1)(iii) and 40 CFR 60.58b(d)(1)(iv)] and Conditions 43 and 44 of 2/4/02 Permit)

20. Covanta Alexandria/Arlington, Inc. may request that compliance with the cadmium or lead emission limit be determined using carbon dioxide measurements corrected to an equivalent of 7 percent oxygen. The relationship between oxygen and carbon dioxide levels for Covanta Alexandria/Arlington, Inc. shall be established as specified in 40 CFR 62.14109(b) [40 CFR 60.58b(b)(6)].
(9 VAC 5-80-110, 40 CFR 62.14109(b) [40 CFR 60.58b(d)(1)(v)] and Condition 45 of 2/4/02 Permit)

21. All performance tests shall consist of a minimum of three test runs conducted under representative full load operating conditions. The average of the cadmium or lead emission concentrations from three test runs or more shall be used to determine compliance.
(9 VAC 5-80-110, 40 CFR 62.14109(b) [40 CFR 60.58b(d)(1)(vi)] and Condition 46 of 2/4/02 Permit)

22. Following the date of the initial performance test or the date on which the initial performance test is required to be completed under 40 CFR 60.8, Covanta Alexandria/Arlington, Inc. shall conduct a performance test for compliance with the emission limits for cadmium and lead on an annual basis (no more than 12 calendar months following the previous performance test).
(9 VAC 5-80-110, 40 CFR 62.14109(b) [40 CFR 60.58b(d)(1)(vii)] and Condition 47 of 2/4/02 Permit)

Mercury

23. The procedures and test methods specified in conditions #III.D.24 through #III.D.32 shall be used to determine compliance with the mercury emission limit under 40 CFR 62.14103(a)(3).
(9 VAC 5-80-110, 40 CFR 62.14109(b) [40 CFR 60.58b(d)(2)] and Condition 48 of 2/4/02 Permit)

24. Reference Method 1 shall be used for determining the location and number of sampling points.
(9 VAC 5-80-110, 40 CFR 62.14109(b) [40 CFR 60.58b(d)(2)(i)] and Condition 49 of 2/4/02 Permit)

25. Reference Method 3, 3A, or 3B, as applicable, shall be used for flue gas analysis.
(9 VAC 5-80-110, 40 CFR 62.14109(b) [40 CFR 60.58b(d)(2)(ii)] and Condition 50 of 2/4/02 Permit)

26. Reference Method 29 shall be used to determine the mercury emission concentration. The minimum sample volume when using Reference Method 29 for mercury shall be 1.7 cubic meters.
(9 VAC 5-80-110, 40 CFR 62.14109(b) [40 CFR 60.58b(d)(2)(iii)] and Condition 51 of 2/4/02 Permit)

27. An oxygen (or carbon dioxide) measurement shall be obtained simultaneously with each Reference Method 29 test run for mercury required under permit condition #III.D.26.
(9 VAC 5-80-110, 40 CFR 62.14109(b) [40 CFR 60.58b(d)(2)(iv)] and Condition 52 of 2/4/02 Permit)

28. The percent reduction in the potential mercury emissions ($\%P_{Hg}$) is computed using the following equation:

$$(\%PHg) = \left(\frac{Ei\_Eo}{Ei} \right) x\ 100$$

where:
$\%P_{Hg}$ = percent reduction of the potential mercury emissions achieved.

E_i = potential mercury emission concentration measured at the control device inlet, corrected to 7 percent oxygen (dry basis).

E_o = controlled mercury emission concentration measured at the mercury control device outlet, corrected to 7 percent oxygen (dry basis).

(9 VAC 5-80-110, 40 CFR 62.14109(b) [40 CFR 60.58b(d)(2)(v)] and Condition 53 of 2/4/02 Permit)

29. All performance tests shall consist of a minimum of three test runs conducted under representative full load operating conditions. The average of the mercury emission concentrations or percent reductions from three test runs or more is used to determine compliance.
(9 VAC 5-80-110, 40 CFR 62.14109(b) [40 CFR 60.58b(d)(2)(vi)] and Condition 54 of 2/4/02 Permit)

30. Covanta Alexandria/Arlington, Inc. may request that compliance with the mercury emission limit be determined using carbon dioxide measurements corrected to an equivalent of 7 percent oxygen. The relationship between oxygen and carbon dioxide levels for Covanta Alexandria/Arlington, Inc. shall be established as specified in 40

CFR 62.14109(b) [40 CFR 60.58b(b)(6)].
(9 VAC 5-80-110, 40 CFR 62.14109(b) [40 CFR 60.58b(d)(2)(vii)] and Condition 55 of 2/4/02 Permit)

31. Following the date that the initial performance test for mercury is completed or is required to be completed under 40 CFR 60.8, Covanta Alexandria/Arlington, Inc. shall conduct a performance test for mercury emissions on a annual basis (no more than 12 calendar months from the previous performance test).
(9 VAC 5-80-110, 40 CFR 62.14109(b) [40 CFR 60.58b(d)(2)(ix)] and Condition 57 of 2/4/02 Permit)

32. Covanta Alexandria/Arlington, Inc. where activated carbon injection is used to comply with the mercury emission limit shall follow the procedures specified in 9 VAC 5-40-8140 J for measuring and calculating carbon usage.
(9 VAC 5-80-110, 40 CFR 62.14109(b) [40 CFR 60.58b(d)(2)(xi)] and Condition 58 of 2/4/02 Permit)

Beryllium

33. Reference Method 29 shall be used for determining compliance with the beryllium emission limits. All performance tests shall consist of a minimum of three test runs conducted under representative full load operating conditions.
(9 VAC 5-80-110E)

34. Covanta Alexandria/Arlington, Inc. shall conduct a performance test for compliance with the emission limits for beryllium on an annual basis (no more than 12 calendar months following the previous beryllium performance test).
(9 VAC 5-80-110E)

Sulfur Dioxide

35. The procedures and test methods specified in conditions #III.D.36 through #III.D.47 shall be used for determining compliance with the sulfur dioxide emission limit under 40 CFR 62.14103(b)(1).
(9 VAC 5-80-110, 40 CFR 62.14109(b) [40 CFR 60.58b(e)] and Condition 59 of 2/4/02 Permit)

36. Reference Method 19, section 4.3, shall be used to calculate the daily geometric average sulfur dioxide emission concentration.
(9 VAC 5-80-110, 40 CFR 62.14109(b) [40 CFR 60.58b(e)(1)] and Condition 60 of 2/4/02 Permit)

37. Reference Method 19, section 5.4, shall be used to determine the daily geometric average percent reduction in the potential sulfur dioxide emission concentration.
(9 VAC 5-80-110, 40 CFR 62.14109(b) [40 CFR 60.58b(e)(2)] and Condition 61 of 2/4/02 Permit)

38. Covanta Alexandria/Arlington, Inc. may request that compliance with the sulfur dioxide emission limit be determined using carbon dioxide measurements corrected to an equivalent of 7 percent oxygen. The relationship between oxygen and carbon dioxide levels for Covanta Alexandria/Arlington, Inc. shall be established as specified in 40 CFR 62.14109(b) [40 CFR 60.58b(b)(6)].
(9 VAC 5-80-110, 40 CFR 62.14109(b) [40 CFR 60.58b(e)(3)] and Condition 62 of 2/4/02 Permit)

39. Covanta Alexandria/Arlington, Inc. shall install, calibrate, maintain, and operate a continuous emission monitoring system for measuring sulfur dioxide emissions discharged to the atmosphere and record the output of the system.
(9 VAC 5-80-110, 40 CFR 62.14109(b) [40 CFR 60.58b(e)(5)] and Condition 64 of 2/4/02 Permit)

40. Following the date that the initial performance test for sulfur dioxide is completed or is required to be completed under 40 CFR 60.8, compliance with the sulfur dioxide emission limit shall be determined based on the 24-hour daily geometric average of the hourly arithmetic average emission concentrations using continuous emission monitoring system outlet data if compliance is based on an emission concentration, or continuous emission monitoring system inlet and outlet data if compliance is based on a percent reduction.
(9 VAC 5-80-110, 40 CFR 62.14109(b) [40 CFR 60.58b(e)(6)] and Condition 65 of 2/4/02 Permit)

41. At a minimum, valid continuous monitoring system hourly averages shall be obtained as specified in sections a. and b. of this condition, for 75 percent of the operating hours per day for 90 percent of the operating days per calendar quarter that Covanta Alexandria/Arlington, Inc. is combusting municipal solid waste.

    a. At least two data points per hour shall be used to calculate each 1-hour arithmetic average.

    b. Each sulfur dioxide 1-hour arithmetic average shall be corrected to 7 percent oxygen on an hourly basis using the 1-hour arithmetic average of the oxygen (or carbon dioxide) continuous emission monitoring system data.

    (9 VAC 5-80-110, 40 CFR 62.14109(b) [40 CFR 60.58b(e)(7)] and Condition 66 of 2/4/02 Permit)

42. The 1-hour arithmetic averages required under permit condition #III.D.37 shall be expressed in parts per million corrected to 7 percent oxygen (dry basis) and used to calculate the 24-hour daily geometric average emission concentrations and daily geometric average emission percent reductions. The 1-hour arithmetic averages shall be calculated using the data points required in 40 CFR 60.13(e)(2).
(9 VAC 5-80-110, 40 CFR 62.14109(b) [40 CFR 60.58b(e)(8)] and Condition 67 of

2/4/02 Permit)

43. All valid continuous emission monitoring system data shall be used in calculating average emission concentrations and percent reductions even if the minimum continuous emission monitoring system data requirements of permit condition #III.D.38 are not met.
(9 VAC 5-80-110, 40 CFR 62.14109(b) [40 CFR 60.58b(e)(9)] and Condition 68 of 2/4/02 Permit)

44. The procedures in 40 CFR 60.13 and 9 VAC 5-40-41.B.2 shall be followed for installation, evaluation, and operation of the continuous emission monitoring system.
(9 VAC 5-80-110, 40 CFR 62.14109(b) [40 CFR 60.58b(e)(10)] and Condition 69 of 2/4/02 Permit)

45. The continuous emission monitoring system shall be operated according to Performance Specification 2 in appendix B of 40 CFR 60.

    a. During each relative accuracy test run of the continuous emission monitoring system required by Performance Specification 2 in appendix B of 40 CFR 60, sulfur dioxide and oxygen (or carbon dioxide) data shall be collected concurrently (or within a 30- to 60-minute period) by both the continuous emission monitors and the test methods specified in sections a.(1) and a.(2) of this permit condition.

        (1) For sulfur dioxide, Reference Method 6, 6A, or 6C shall be used.

        (2) For oxygen (or carbon dioxide), Reference Method 3, 3A, or 3B, as applicable, shall be used.

    b. The span value of the continuous emissions monitoring system at the inlet to the sulfur dioxide control device shall be 125 percent of the maximum estimated hourly potential sulfur dioxide emissions of the municipal waste combustor unit. The span value of the continuous emission monitoring system at the outlet of the sulfur dioxide control device shall be 50 percent of the maximum estimated hourly potential sulfur dioxide emissions of the municipal waste combustor unit.

    (9 VAC 5-80-110, 40 CFR 62.14109(b) [40 CFR 60.58b(e)(12)] and Condition 71 of 2/4/02 Permit)

46. Quarterly accuracy determinations and daily calibration drift tests shall be performed in accordance with procedure 1 in appendix F of 40 CFR 60.
(9 VAC 5-80-110, 40 CFR 62.14109(b) [40 CFR 60.58b(e)(13)] and Condition 72 of 2/4/02 Permit)

47. When sulfur dioxide emissions data are not obtained because of continuous emission monitoring system breakdowns, repairs, calibration checks, and zero and span adjustments, emissions data shall be obtained by using other monitoring systems as approved by the board or Reference Method 19 to provide, as necessary, valid

emissions data for a minimum of 75 percent of the hours per day that Covanta Alexandria/Arlington, Inc. is operated and combusting municipal solid waste for 90 percent of the days per calendar quarter that Covanta Alexandria/Arlington, Inc. is operated and combusting municipal solid waste.
(9 VAC 5-80-110, 40 CFR 62.14109(b) [40 CFR 60.58b(e)(14)] and Condition 73 of 2/4/02 Permit)

Hydrogen chloride

48. The procedures and test methods specified in conditions #III.D.49 through #III.D.54 shall be used for determining compliance with the hydrogen chloride emission limit under 40 CFR 62.14103(b)(2).
(9 VAC 5-80-110, 40 CFR 62.14109(b) [40 CFR 60.58b(f)] and Condition 74 of 2/4/02 Permit)

49. Reference Method 26 or 26A, as applicable, shall be used to determine the hydrogen chloride emission concentration. The minimum sampling time for Reference Method 26 shall be 1 hour.
(9 VAC 5-80-110, 40 CFR 62.14109(b) [40 CFR 60.58b(f)(1)] and Condition 75 of 2/4/02 Permit)

50. An oxygen (or carbon dioxide) measurement shall be obtained simultaneously with each Reference Method 26 test run for hydrogen chloride required by permit condition #III.D.49.
(9 VAC 5-80-110, 40 CFR 62.14109(b) [40 CFR 60.58b(f)(2)] and Condition 76 of 2/4/02 Permit)

51. The percent reduction in potential hydrogen chloride emissions (% P_{HCl}) is computed using the following equation:

$$(\%PHCl) = \left(\frac{Ei\_Eo}{Ei} \right) x\ 100$$

where:

$\%P_{HCl}$ = percent reduction of the potential hydrogen chloride emissions achieved.

E_i = potential hydrogen chloride emission concentration measured at the control device inlet, corrected to 7 percent oxygen (dry basis).

E_O = controlled hydrogen chloride emission concentration measured at the control device outlet, corrected to 7 percent oxygen (dry basis).

(9 VAC 5-80-110, 40 CFR 62.14109(b) [40 CFR 60.58b(f)(3)] and Condition 77 of 2/4/02 Permit)

52. Covanta Alexandria/Arlington, Inc. may request that compliance with the hydrogen

chloride emission limit be determined using carbon dioxide measurements corrected to an equivalent of 7 percent oxygen. The relationship between oxygen and carbon dioxide levels for Covanta Alexandria/Arlington, Inc. shall be established as specified in 40 CFR 62.14109(b) [40 CFR 60.58b(b)(6)].
(9 VAC 5-80-110, 40 CFR 62.14109(b) [40 CFR 60.58b(f)(4)] and Condition 78 of 2/4/02 Permit)

53. All performance tests shall consist of three test runs. The average of the hydrogen chloride emission concentrations or percent reductions from the three test runs is used to determine compliance.
(9 VAC 5-80-110, 40 CFR 62.14109(b) [40 CFR 60.58b(f)(5)], 9 VAC 5-40-30, 40 CFR 60.8 and Condition 79 of 2/4/02 Permit)

54. Following the date that the initial performance test for hydrogen chloride is completed or is required to be completed under 40 CFR 60.8, Covanta Alexandria/Arlington, Inc. shall conduct a performance test for hydrogen chloride emissions on an annual basis (no more than 12 calendar months following the previous performance test).
(9 VAC 5-80-110, 40 CFR 62.14109(b) [40 CFR 60.58b(f)(7)] and Condition 81 of 2/4/02 Permit)

Dioxin/Furan

55. The procedures and test methods specified in conditions #III.D.56 through #III.D.62 shall be used to determine compliance with the limits for dioxin/furan emissions under 40 CFR 62.14103(c)(2).
(9 VAC 5-80-110, 40 CFR 62.14109(b) [40 CFR 60.58b(g)] and Condition 82 of 2/4/02 Permit)

56. Reference Method 1 shall be used for determining the location and number of sampling points.
(9 VAC 5-80-110, 40 CFR 62.14109(b) [40 CFR 60.58b(g)(1)] and Condition 83 of 2/4/02 Permit)

57. Reference Method 3, 3A, or 3B, as applicable, shall be used for flue gas analysis.
(9 VAC 5-80-110, 40 CFR 62.14109(b) [40 CFR 60.58b(g)(2)] and Condition 84 of 2/4/02 Permit)

58. Reference Method 23 shall be used for determining the dioxin/furan emission concentration.

    a. The minimum sample time shall be 4 hours per test run.

    b. An oxygen (or carbon dioxide) measurement shall be obtained simultaneously with each Reference Method 23 test run for dioxins/furans.

    (9 VAC 5-80-110, 40 CFR 62.14109(b) [40 CFR 60.58b(g)(3)] and Condition 85 of

2/4/02 Permit)

59. Following the date that the initial performance test for dioxins/furans is completed or is required to be completed under 40 CFR 60.8, Covanta Alexandria/Arlington, Inc. shall conduct performance tests for dioxin/furan emissions in accordance with permit condition # III.D.55, according to one of the schedules in sections a. and b. of this permit condition.

    a. For affected facilities, performance tests shall be conducted on an annual basis (no more than 12 calendar months following the previous performance test).

    b. Where all performance tests over a 2-year period indicate that dioxin/furan emissions are less than or equal to 15 nanograms per dry standard cubic meter (total mass) for all affected facilities located within a municipal waste combustor plant, the owner of the municipal waste combustor plant may elect to conduct annual performance tests for one affected facility (i.e., unit) per year at the municipal waste combustor plant. At a minimum, a performance test for dioxin/furan emissions shall be conducted annually (no more than 12 months following the previous performance test) for one affected facility at the municipal waste combustor plant. Each year a different affected facility at the municipal waste combustor plant shall be tested, and the affected facilities at the plant shall be tested in sequence (e.g., unit 1, unit 2, unit 3, as applicable). If each annual performance test continues to indicate a dioxin/furan emission level less than or equal to 15 nanograms per dry standard cubic meter (total mass), the owner may continue conducting a performance test on only one affected facility per year. If any annual performance test indicates a dioxin/furan emission level greater than 15 nanograms per dry standard cubic meter (total mass), performance tests thereafter shall be conducted annually on all affected facilities at the plant until and unless all annual performance tests for all affected facilities at the plant over a 2-year period indicate a dioxin/furan emission level less than or equal to 15 nanograms per dry standard cubic meter (total mass).

    (9 VAC 5-80-110, 40 CFR 62.14109(b) [40 CFR 60.58b(g)(5) and 40 CFR 60.58b(g)(5)(i)], 40 CFR 62.14109(d)(1) and Condition 87 of 2/4/02 Permit)

60. If Covanta Alexandria/Arlington, Inc. elects to follow the performance testing schedule specified in permit conditions #III.D.59.a and #III.D.59.b above, Covanta Alexandria/Arlington, Inc. shall follow the procedures specified in 40 CFR 62.14109(b) [40 CFR 60.59b(g)(4)] for reporting the selection of this schedule. (9 VAC 5-80-110, 40 CFR 62.14109(b) [40 CFR 60.58b(g)(6)] and Condition 88 of 2/4/02 Permit)

61. Covanta Alexandria/Arlington, Inc. may request that compliance with the dioxin/furan emission limit be determined using carbon dioxide measurements corrected to an equivalent of 7 percent oxygen. The relationship between oxygen and carbon dioxide levels for Covanta Alexandria/Arlington, Inc. shall be established as specified in 40 CFR 62.14109(b) [40 CFR 60.58b(b)(6)].

(9 VAC 5-80-110, 40 CFR 62.14109(b) [40 CFR 60.58b(g)(8)] and Condition 90 of 2/4/02 Permit)

62. All performance tests shall consist of three test runs. The average of the dioxin/furan emission concentrations from the three test runs is used to determine compliance.
(9 VAC 5-80-110, 40 CFR 62.14109(b) [40 CFR 60.58b(g)(9)], 9 VAC 5-40-30, 40 CFR 60.8 and Condition 91 of 2/4/02 Permit)

Nitrogen Oxides

63. The procedures and test methods specified in conditions #66 through #76 shall be used to determine compliance with the nitrogen oxides emission limit for affected facilities under 40 CFR 62.14103(d).
(9 VAC 5-80-110, 40 CFR 62.14109(b) [40 CFR 60.58b(h)] and Condition 92 of 2/4/02 Permit)

64. Reference Method 19, section 4.1, shall be used for determining the daily arithmetic average nitrogen oxides emission concentration.
(9 VAC 5-80-110, 40 CFR 62.14109(b) [40 CFR 60.58b(h)(1)] and Condition 93 of 2/4/02 Permit)

65. Covanta Alexandria/Arlington, Inc. may request that compliance with the nitrogen oxides emission limit be determined using carbon dioxide measurements corrected to an equivalent of 7 percent oxygen. The relationship between oxygen and carbon dioxide levels for Covanta Alexandria/Arlington, Inc. shall be established as specified in 40 CFR 62.14109(b) [40 CFR 60.58b(b)(6)].
(9 VAC 5-80-110, 40 CFR 62.14109(b) [40 CFR 60.58b(h)(2)] and Condition 94 of 2/4/02 Permit)

66. Covanta Alexandria/Arlington, Inc. is subject to the nitrogen oxides emission limit under 40 CFR 62.14103(d) and shall install, calibrate, maintain, and operate a continuous emission monitoring system for measuring nitrogen oxides discharged to the atmosphere, and record the output of the system.
(9 VAC 5-80-110, 40 CFR 62.14109(b) [40 CFR 60.58b(h)(4)] and Condition 96 of 2/4/02 Permit)

67. Following the date that the initial performance test for nitrogen oxides is completed or is required to be completed under 40 CFR 60.8, compliance with the emission limit for nitrogen oxides required under 40 CFR 62.14103(d) shall be determined based on the 24-hour daily arithmetic average of the hourly emission concentrations using continuous emission monitoring system outlet data.
(9 VAC 5-80-110, 40 CFR 62.14109(b) [40 CFR 60.58b(h)(5)] and Condition 97 of 2/4/02 Permit)

68. At a minimum, valid continuous emission monitoring system hourly averages shall be obtained as specified in sections a. and b. of this condition for 75 percent of the operating hours per day for 90 percent of the operating days per calendar quarter that

Covanta Alexandria/Arlington, Inc. is combusting municipal solid waste.

a. At least 2 data points per hour shall be used to calculate each 1-hour arithmetic average.

b. Each nitrogen oxides 1-hour arithmetic average shall be corrected to 7 percent oxygen on an hourly basis using the 1-hour arithmetic average of the oxygen (or carbon dioxide) continuous emission monitoring system data.

(9 VAC 5-80-110, 40 CFR 62.14109(b) [40 CFR 60.58b(h)(6)] and Condition 98 of 2/4/02 Permit)

69. The 1-hour arithmetic averages required by permit condition #III.D.64 shall be expressed in parts per million by volume (dry basis) and used to calculate the 24-hour daily arithmetic average concentrations. The 1-hour arithmetic averages shall be calculated using the data points required in 40 CFR 60.13(e)(2).
(9 VAC 5-80-110, 40 CFR 62.14109(b) [40 CFR 60.58b(h)(7)] and Condition 99 of 2/4/02 Permit)

70. All valid continuous emission monitoring system data must be used in calculating emission averages even if the minimum continuous emission monitoring system data requirements of permit condition #III.D.65 are not met.
(9 VAC 5-80-110, 40 CFR 62.14109(b) [40 CFR 60.58b(h)(8)] and Condition 100 of 2/4/02 Permit)

71. The procedures in 40 CFR 6.13 and 9 VAC 5-40-41.B.2 shall be followed for installation, evaluation, and operation of the continuous emission monitoring system. The initial performance evaluation shall be completed as specified under 40 CFR 60.8.
(9 VAC 5-80-110, 40 CFR 62.14109(b) [40 CFR 60.58b(h)(9)] and Condition 101 of 2/4/02 Permit)

72. Covanta Alexandria/Arlington, Inc. shall operate the continuous emission monitoring system according to Performance Specification 2 in appendix B of 40 CFR 60 and shall follow the procedures and methods as follows:

a. During each relative accuracy test run of the continuous emission monitoring system required by Performance Specification 2 of appendix B of 40 CFR 60, nitrogen oxides and oxygen (or carbon dioxide) data shall be collected concurrently (or within a 30- to 60-minute period) by both the continuous emission monitors and the test methods specified in sections a.(1) and a.(2) of this permit condition.

(1) For nitrogen oxides, Reference Method 7, 7A, 7C, 7D, or 7E shall be used.

(2) For oxygen (or carbon dioxide), Reference Method 3, 3A, or 3B,

as applicable, shall be used.

b. The span value of the continuous emission monitoring system shall be 125 percent of the maximum estimated hourly potential nitrogen oxide emissions of the municipal waste combustor unit.

(9 VAC 5-80-110, 40 CFR 62.14109(b) [40 CFR 60.58b(h)(10)] and Condition 102 of 2/4/02 Permit)

73. Quarterly accuracy determinations and daily calibration drift tests shall be performed in accordance with procedure 1 in appendix F of 40 CFR 60.
(9 VAC 5-80-110, 40 CFR 62.14109(b) [40 CFR 60.58b(h)(11)] and Condition 103 of 2/4/02 Permit)

74. When nitrogen oxides continuous emissions data are not obtained because of continuous emission monitoring system breakdowns, repairs, calibration checks, and zero and span adjustments, emissions data shall be obtained using other monitoring systems as approved by the board or Reference Method 19 to provide, as necessary, valid emissions data for a minimum of 75 percent of the hours per day for 90 percent of the days per calendar quarter the unit is operated and combusting municipal solid waste.
(9 VAC 5-80-110, 40 CFR 62.14109(b) [40 CFR 60.58b(h)(12)] and Condition 104 of 2/4/02 Permit)

Fugitive Ash

75. Reference Method 22 shall be used for determining compliance with the fugitive ash emission limit under 40 CFR 62.14106. The minimum observation time shall be a series of three 1-hour observations. The observation period shall include times when the facility is transferring ash from the municipal waste combustor unit to the area where ash is stored or loaded into containers or trucks.
(9 VAC 5-80-110, 40 CFR 62.14109(b) [40 CFR 60.58b(k)(1)] and Condition 106 of 2/4/02 Permit)

76. The average duration of visible emissions per hour shall be calculated from the three 1-hour observations. The average shall be used to determine compliance with 40 CFR 62.14106.
(9 VAC 5-80-110, 40 CFR 62.14109(b) [40 CFR 60.58b(k)(2)] and Condition 107 of 2/4/02 Permit)

77. Following the date that the initial performance test for fugitive ash emissions is completed or is required to be completed under 40 CFR 60.8 for an affected facility, the owner shall conduct a performance test for fugitive ash emissions on an annual basis (no more than 12 calendar months following the previous performance test).
(9 VAC 5-80-110, 40 CFR 62.14109(b) [40 CFR 60.58b(k)(4)] and Condition 109 of 2/4/02 Permit)

Carbon Mass

78. Since activated carbon injection is used at Covanta Alexandria/Arlington, Inc. to comply with the mercury emission limit under 40 CFR 62.14103(a)(3), or the dioxin/furan emission limits under 40 CFR 62.14103(c)(2), or the dioxin/furan emission level specified in 40 CFR 62.14109(d)(1), Covanta Alexandria/Arlington, Inc. shall follow the procedures specified in conditions #III.D.79 through #III.D.81. (9 VAC 5-80-110, 40 CFR 62.14109(b) [40 CFR 60.58b(m)], 40 CFR 62.14103(a)(3), 40 CFR 62.14103(c)(2), 40 CFR 62.14109(d)(1) and Condition 110 of 2/4/02 Permit)

79. During the performance tests for dioxins/furans and mercury, as applicable, the owner shall estimate an average carbon mass feed rate based on carbon injection system operating parameters such as the gravimetric feed rate, hopper volume, hopper refill frequency, or other parameters appropriate to the feed system being employed, as specified in section a. of this permit condition.

    a. An average carbon mass feed rate in kilograms per hour or pounds per hour shall be estimated during the initial performance test for mercury emissions and each subsequent performance test for mercury emissions. The average carbon mass feed rate shall be based on a 6-hour average or the total sampling time of the most recent annual performance test for mercury.

    (9 VAC 5-80-110, 40 CFR 62.14109(b) [40 CFR 60.58b(m)(1)] and Condition 111 of 2/4/02 Permit)

80. During operation of Covanta Alexandria/Arlington, Inc., the carbon injection system operating parameter(s) that are the primary indicator(s) of the carbon mass feed rate (e.g., gravimetric feeder setting) must equal or exceed the level(s) documented during the performance tests specified under permit condition #III.D.77.a.
(9 VAC 5-80-110, 40 CFR 62.14109(b) [40 CFR 60.58b(m)(2)] and Condition 112 of 2/4/02 Permit)

81. Covanta Alexandria/Arlington, Inc. shall estimate the total carbon usage of the plant (kilograms or pounds) for each calendar quarter by two independent methods, according to the procedures in sections a. and b. of this permit condition.

    a. The weight of carbon delivered to the plant.

    b. Estimate the average carbon mass feed rate in kilograms per hour or pounds per hour for each hour of operation for each affected facility based on the parameters specified under permit condition #III.D.77, and sum the results for all affected facilities at the plant for the total number of hours of operation during the calendar quarter.

    (9 VAC 5-80-110, 40 CFR 62.14109(b) [40 CFR 60.58b(m)(3)] and Condition 113 of 2/4/02 Permit)

E. Reporting

1. Annual emissions and a certification of compliance with the facility annual permit mass emission limitations utilizing a combination of steam production data, CEMS data, and results of stack testing shall be included in Covanta Alexandria/Arlington, Inc.'s annual report.
   (9 VAC 5-80-110, 9 VAC 5-50-50 and Condition 157 of 2/4/02 Permit)

2. Covanta Alexandria/Arlington, Inc. shall demonstrate compliance in its annual report with all the lb/MMBtu and lb/hr mass emission limitations, or for HCl, SO_2 and mercury the percent removal requirements utilizing a combination of steam production data, CEMS data, and results of stack testing.
   (9 VAC 5-80-110, 9 VAC 5-50-50 and Condition 158 of 2/4/02 Permit)

3. Covanta Alexandria/Arlington, Inc. shall document in its annual report that actual carbon monoxide (CO) emissions have not increased more than 99 tons per year from an average of 1998 & 1999 facility wide actual CO emissions of 46.5 tons/yr, calculated on a cumulative basis.
   (9 VAC 5-80-110, 9 VAC 5-50-50 and Condition 159 of 2/4/02 Permit)

4. Covanta Alexandria/Arlington, Inc. shall submit a semiannual report including the information specified in permit conditions #III.E.5 through #III.E.8, as applicable, according to the schedule specified in Condition III.E.15.
   (9 VAC 5-80-110, 40 CFR 62.14109 [40 CFR 60.59b(g)] and Condition 152 of 2/4/02 Permit)

5. A summary of data collected for all pollutants and parameters regulated under this article, which includes the information specified in sections a. through e. of this permit condition.

   a. A list of the particulate matter, opacity, cadmium, lead, mercury, dioxins/furans, hydrogen chloride, and fugitive ash emission levels achieved during the performance tests recorded under permit condition #III.C.9.

   b. A list of the highest emission level recorded for sulfur dioxide, nitrogen oxides, carbon monoxide, municipal waste combustor unit load level, and particulate matter control device inlet temperature based on the data recorded under permit condition #III.C.3.b.

   c. List the highest opacity level measured, based on the data recorded under permit condition #III.C.3.a.(1).

   d. The total number of days that the minimum number of hours of data for sulfur dioxide, nitrogen oxides, carbon monoxide, municipal waste combustor unit load,

and particulate matter control device temperature data were not obtained based on the data recorded under permit condition #III.C.6.

e. The total number of hours that data for sulfur dioxide, nitrogen oxides, carbon monoxide, municipal waste combustor unit load, and particulate matter control device temperature were excluded from the calculation of average emission concentrations or parameters based on the data recorded under permit condition #III.C.7.

(9 VAC 5-80-110, 40 CFR62.14109 [40 CFR 60.59b(g)(1)] and Condition 153 of 2/4/02 Permit)

6. The summary of data reported under permit condition #III.E.5 shall also provide the types of data specified in permit condition #III.E.5 for the calendar year preceding the year being reported, in order to provide the board with a summary of the performance of Covanta Alexandria/Arlington, Inc. over a 2-year period.
(9 VAC 5-80-110, 40 CFR62.14109 [40 CFR 60.59b(g)(2)] and Condition 154 of 2/4/02 Permit)

7. The summary of data including the information specified in permit conditions #III.E.5 and #III.E.6 shall highlight any emission or parameter levels that did not achieve the emission or parameter limits specified under this subpart.
(9 VAC 5-80-110, 40 CFR62.14109 [40 CFR 60.59b(g)(3)] and Condition 155 of 2/4/02 Permit)

8. A notification of intent to begin the reduced dioxin/furan performance testing schedule specified in 40 CFR62.14109 [40 CFR 60.58b(g)(5)(iii)] during the following calendar year.
(9 VAC 5-80-110, 40 CFR62.14109 [40 CFR 60.59b(g)(4)] and Condition 156 of 2/4/02 Permit)

9. Covanta Alexandria/Arlington, Inc. shall submit a semiannual report that includes the information specified in permit conditions #III.E.10 through #III.E.14 for any recorded pollutant or parameter that does not comply with the pollutant or parameter limit specified under this article, according to the schedule specified under permit condition #III.E.15.
(9 VAC 5-80-110, 40 CFR62.14109 [40 CFR 60.59b(h)] and Condition 160 of 2/4/02 Permit)

10. The semiannual report shall include information recorded under permit condition #III.C.4 for sulfur dioxide, nitrogen oxides, carbon monoxide, municipal waste combustor unit load level, particulate matter control device inlet temperature, and opacity.
(9 VAC 5-80-110, 40 CFR62.14109 [40 CFR 60.59b(h)(1)] and Condition 161 of 2/4/02 Permit)

11. For each date recorded as required by permit condition #III.C.4 and reported as required by permit condition #III.E.10, the semiannual report shall include the sulfur dioxide, nitrogen oxides, carbon monoxide, municipal waste combustor unit load level, particulate matter control device inlet temperature, or opacity data, as applicable, recorded under permit conditions #III.C.3.a.(1) and #III.C.3.b, as applicable.
    (9 VAC 5-80-110, 40 CFR62.14109 [40 CFR 60.59b(h)(2)] and Condition 162 of 2/4/02 Permit)

12. If the test reports recorded under permit condition #III.C.9 document any particulate matter, opacity, cadmium, lead, mercury, dioxins/furans, hydrogen chloride, and fugitive ash emission levels that were above the applicable pollutant limits, the semiannual report shall include a copy of the test report documenting the emission levels and the corrective actions taken.
    (9 VAC 5-80-110, 40 CFR62.14109 [40 CFR 60.59b(h)(3)] and Condition 163 of 2/4/02 Permit)

13. The semiannual report shall include the information recorded under permit condition #III.C.13 for the carbon injection system operating parameter(s) that are the primary indicator(s) of carbon mass feed rate.
    (9 VAC 5-80-110, 40 CFR62.14109 [40 CFR 60.59b(h)(4)] and Condition 164 of 2/4/02 Permit)

14. For each operating date reported as required by permit condition #III.E.13 the semiannual report shall include the carbon feed rate data recorded under permit condition #III.C.5.b.
(9 VAC 5-80-110, 40 CFR62.14109 [40 CFR 60.59b(h)(5)] and Condition 165 of 2/4/02 Permit)

15. Semiannual reports required by permit conditions #III.E.4 through #III.E.14 shall be submitted according to the schedule specified in sections a. and b. of this permit condition.

    a. If the data reported in accordance with permit conditions #III.E.4 through #III.E.14 were collected during the first calendar half, then the report shall be submitted by August 1 following the first calendar half.

    b. If the data reported in accordance with permit conditions #III.E.4 through #III.E.14 were collected during the second calendar half, then the report shall be submitted by February 1 following the second calendar half.

    (9 VAC 5-80-110, 40 CFR62.14109 [40 CFR 60.59b(h)(6)] and Condition 166 of 2/4/02 Permit)

16. All reports specified under permit conditions #III.E.4 through #III.E.14 shall be submitted as a paper copy, postmarked on or before the submittal dates specified under these permit conditions, and maintained onsite as a paper copy for a period of 5 years.
(9 VAC 5-80-110, 40 CFR62.14109 [40 CFR 60.59b(j)] and Condition 167 of 2/4/02 Permit)

17. If Covanta Alexandria/Arlington, Inc. would prefer to select a different annual or semiannual date for submitting the periodic reports required by permit conditions #III.E.4 through #III.E.15, then the dates may be changed by mutual agreement between the owner and the board.
(9 VAC 5-80-110, 40 CFR62.14109 [40 CFR 60.59b(l)] and Condition 169 of 2/4/02 Permit)

18. The permittee shall provide written notification to the Air Compliance Manager, Northern Virginia Regional Office of DEQ of the date of any emissions test that will be used to determine compliance with a standard. Notification shall be postmarked not less than 30 days prior to such date.
(9 VAC 5-80-110, 40 CFR 60.7, 40 CFR 60.8 and 9 VAC 5-40-50.A.2)

19. The appropriate reporting provisions of 40 CFR 60.49b are applicable to Covanta Alexandria/Arlington, Inc..
(9 VAC 5-80-110 and 40 CFR 60.49b)

IV. Requirements for Storage Silos– (Emission Units 004-01 and 005-01)

A. Limitations

1. Particulate emissions from the carbon silo shall be controlled by a fabric filter. The fabric filter shall be provided with adequate access for inspection.
(9 VAC 5-80-110, 9 VAC 5-50-90 and Condition 4A of 2/4/02 Permit)

2. Particulate emissions from the lime silo shall be controlled by a fabric filter. The fabric filter shall be provided with adequate access for inspection.
(9 VAC 5-80-110, 9 VAC 5-50-90 and Condition 4A of 2/4/02 Permit)

3. Visible emissions from the carbon and lime silos shall not exceed 20% opacity except during one six-minute period in any one hour in which visible emissions shall not exceed 30% opacity.
(9 VAC 5-50-80, 9 VAC 5-80-110 and Condition 12A of 2/4/02 Permit)

4. Particulate matter emissions from the carbon silo shall not exceed 22.22 lbs/hr.
(9 VAC 5-80-110, 9 VAC 5-40-270 and Condition 10A of 2/4/02 Permit)

5. Particulate matter emissions from the lime silo shall not exceed 22.22 lbs/hr.
(9 VAC 5-80-110, 9 VAC 5-40-270 and Condition 10A of 2/4/02 Permit)

B. Testing

1. The permitted facility shall be constructed so as to allow for emissions testing at any time using appropriate methods. Upon request from the Department, test ports shall be provided at the appropriate locations.
(9 VAC 5-50-30 and 9 VAC 5-80-110)

2. If testing is conducted in addition to the monitoring specified in this permit, the permittee shall use the following test methods in accordance with procedures approved by the DEQ as follows:

Pollutant	Test Method (40 CFR Part 60, Appendix A)
PM/PM-10	EPA Method 5, 17
Visible Emission	EPA Method 9

(9 VAC 5-80-110)

V. Requirements for Storage Tank– (Emission unit 006-01)

A. Recordkeeping

1. The permittee shall keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel. The content and format of such records shall be arranged with the Air Compliance Manager, Northern Virginia Regional Office. These records shall be available on-site for inspection by the DEQ for the life of the source.
(9 VAC 5-80-110, 40 CFR 60.110b(c) and 40 CFR 60.116b(a)-(b))

VI. Facility Wide Conditions

A. Reporting

1. **Notification for Control Equipment Maintenance** - The permittee shall furnish notification to the Air Compliance Manager, Northern Virginia Regional Office of the intention to shut down or bypass, or both, air pollution control equipment for necessary scheduled maintenance, which results in excess emissions for more than one hour, at least 24 hours prior to the shutdown. The notification shall include, but is not limited to, the following information:

   a. Identification of the air pollution control equipment to be taken out of service, as well as its location, and registration number;

   b. The expected length of time that the air pollution control equipment will be out of service;

   c. The nature and quantity of emissions of air pollutants likely to occur during the shutdown period;

   d. Measures that will be taken to minimize the length of the shutdown or to negate the effect of the outage.

   (9 VAC 5-80-110, 9 VAC 5-20-180 B and Condition 180 of 2/4/02 Permit)

VII. Insignificant Emission Units

The following emission units at the facility are identified in the application as insignificant emission units under 9 VAC 5-80-720:

Emission Unit No.	Emission Unit Description	Citation	Pollutants Emitted (9 VAC 5-80-720 B)	Rated Capacity (9 VAC 5-80-720 C)
IU-1	MSW Building/Pit	9 VAC 5-80-720B	PM, PM_{10} and VOC	N/A
IU-2	Ash Building	9 VAC 5-80-720B	PM, PM_{10}, SO_2, HCl, Cd, Pb and Hg	N/A
IU-3	Water Heater	9 VAC 5-80-720C.2	N/A	199,999 Btu/hr
IU-4	Emergency Diesel Generator	9 VAC 5-80-720C.4	N/A	230 KW

These emission units are presumed to be in compliance with all requirements of the federal Clean Air Act as may apply. Based on this presumption, no monitoring, recordkeeping, or reporting shall be required for these emission units in accordance with 9 VAC 5-80-110.

VIII. Permit Shield & Inapplicable Requirements

1. Compliance with the provisions of this permit shall be deemed compliance with all applicable requirements in effect as of the permit issuance date as identified in this permit. This permit shield covers only those applicable requirements covered by terms and conditions in this permit and the following requirements which have been specifically identified as being not applicable to this permitted facility:

Citation	Title of Citation	Description of Applicability
No inapplicable requirements were identified in the permit application.		

2. Nothing in this permit shield shall alter the provisions of §303 of the federal Clean Air Act, including the authority of the administrator under that section, the liability of the owner for any violation of applicable requirements prior to or at the time of permit issuance, or the ability to obtain information by the administrator pursuant to §114 of the federal Clean Air Act, (ii) the Board pursuant to §10.1-1314 or §10.1-1315 of the Virginia Air Pollution Control Law or (iii) the Department pursuant to §10.1-1307.3 of the Virginia Air Pollution Control Law.
(9 VAC 5-80-140)

IX. General Conditions

A. Federal Enforceability

All terms and conditions in this permit are enforceable by the administrator and citizens under the federal Clean Air Act, except those that have been designated as only state-enforceable.
(9 VAC 5-80-110 N)

B. Permit Expiration

This permit has a fixed term of five years. The expiration date shall be the date five years from the date of issuance. Unless a timely and complete renewal application consistent, with 9 VAC 5-80-80, has been submitted, to the Department, by the owner, the right of the facility to operate shall be terminated upon permit expiration.

1. The owner shall submit an application for renewal at least six months but no earlier than eighteen months prior to the date of permit expiration.

2. If an applicant submits a timely and complete application for an initial permit or renewal under this section, the failure of the source to have a permit or the operation of the source without a permit shall not be a violation of Article 1, Part II of 9 VAC 5 Chapter 80, until the Board takes final action on the application under 9 VAC 5-80-150.

3. No source shall operate after the time that it is required to submit a timely and complete application under subsections C and D of 9 VAC 5-80-80 for a renewal permit, except in compliance with a permit issued under Article 1, Part II of 9 VAC 5 Chapter 80.

4. If an applicant submits a timely and complete application under section 9 VAC 5-80-80 for a permit renewal but the Board fails to issue or deny the renewal permit before the end of the term of the previous permit, (i) the previous permit shall not expire until the renewal permit has been issued or denied and (ii) all the terms and conditions of the previous permit, including any permit shield granted pursuant to 9 VAC 5-80-140, shall remain in effect from the date the application is determined to be complete until the renewal permit is issued or denied.

5. The protection under subsections F 1 and F 5 (ii) of section 9 VAC 5-80-80 F shall cease to apply if, subsequent to the completeness determination made pursuant section 9 VAC 5-80-80 D, the applicant fails to submit by the deadline specified in writing by the Board any additional information identified as being needed to process the application.

(9 VAC 5-80-80 B, C and F, 9 VAC 5-80-110 D and 9 VAC 5-80-170 B)

C. Recordkeeping and Reporting

1. All records of monitoring information maintained to demonstrate compliance with the terms and conditions of this permit shall contain, where applicable, the following:

   a. The date, place as defined in the permit, and time of sampling or measurements.

   b. The date(s) analyses were performed.

   c. The company or entity that performed the analyses.

   d. The analytical techniques or methods used.

   e. The results of such analyses.

   f. The operating conditions existing at the time of sampling or measurement.

   (9 VAC 5-80-110 F)

2. Records of all monitoring data and support information shall be retained for at least five years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit.
   (9 VAC 5-80-110 F)

3. The permittee shall submit the results of monitoring contained in any applicable requirement to DEQ no later than **March 1** and **September 1** of each calendar year. This report must be signed by a responsible official, consistent with 9 VAC 5-80-80 G, and shall include:

   a. The time period included in the report. The time periods to be addressed are January 1 to June 30 and July 1 to December 31.

   b. All deviations from permit requirements. For purposes of this permit, deviations include, but are not limited to:

      i. Exceedance of emissions limitations or operational restrictions;

      ii. Excursions from control device operating parameter requirements, as documented by continuous emission monitoring, periodic monitoring, or compliance assurance monitoring which indicates an exceedance of emission limitations or operational restrictions; or,

iii. Failure to meet monitoring, recordkeeping, or reporting requirements contained in this permit.

c. If there were no deviations from permit conditions during the time period, the permittee shall include a statement in the report that "no deviations from permit requirements occurred during this semi-annual reporting period."

(9 VAC 5-80-110 F)

D. Annual Compliance Certification

Exclusive of any reporting required to assure compliance with the terms and conditions of this permit or as part of a schedule of compliance contained in this permit, the permittee shall submit to EPA and DEQ no later than **March 1** each calendar year a certification of compliance with all terms and conditions of this permit including emission limitation standards or work practices. The compliance certification shall comply with such additional requirements that may be specified pursuant to §114(a)(3) and §504(b) of the federal Clean Air Act. This certification shall be signed by a responsible official, consistent with 9 VAC 5-80-80 G, and shall include:

1. The time period included in the certification. The time period to be addressed is January 1 to December 31.

2. The identification of each term or condition of the permit that is the basis of the certification.

3. The compliance status.

4. Whether compliance was continuous or intermittent, and if not continuous, documentation of each incident of non-compliance.

5. Consistent with subsection 9 VAC 5-80-110 E, the method or methods used for determining the compliance status of the source at the time of certification and over the reporting period.

6. Such other facts as the permit may require to determine the compliance status of the source.

One copy of the annual compliance certification shall be sent to EPA at the following address:

Clean Air Act Title V Compliance Certification (3AP00)
U. S. Environmental Protection Agency, Region III
1650 Arch Street
Philadelphia, PA 19103-2029.

(9 VAC 5-80-110 K.5)

E. Permit Deviation Reporting

The permittee shall notify the Air Compliance Manager, Northern Virginia Regional Office, within four daytime business hours, after discovery of any deviations from permit requirements which may cause excess emissions for more than one hour, including those attributable to upset conditions as may be defined in this permit. In addition, within 14 days of the discovery, the permittee shall provide a written statement explaining the problem, any corrective actions or preventative measures taken, and the estimated duration of the permit deviation. The occurrence should also be reported in the next semi-annual compliance monitoring report pursuant to General Condition IX.C.3. of this permit.
(9 VAC 5-80-110 F.2 and 9 VAC 5-80-250)

F. Failure/Malfunction Reporting

In the event that any affected facility or related air pollution control equipment fails or malfunctions in such a manner that may cause excess emissions for more than one hour, the owner shall, as soon as practicable but no later than four daytime business hours, notify the Air Compliance Manager, Northern Virginia Regional Office by facsimile transmission, telephone or telegraph of such failure or malfunction and shall within two weeks provide a written statement giving all pertinent facts, including the estimated duration of the breakdown. Excess emissions for NO_x, SO_2 and CO for more than one hour shall be based on the averaging periods specified in Conditions # III.A.11 and the emission limits specified in Condition III.A.12. Owners subject to the requirements of 9 VAC 5-40-50 C and 9 VAC 5-50-50 C are not required to provide the written statement prescribed in this paragraph for facilities subject to the monitoring requirements of 9 VAC 5-40-40 and 9 VAC 5-50-40. When the condition causing the failure or malfunction has been corrected and the equipment is again in operation, the owner shall notify the Air Compliance Manager, Northern Virginia Regional Office.

1. The emission units that have continuous monitors subject to 9 VAC 5-40-50 C and 9 VAC 5-50-50 C are not subject to the two week written notification.

2. The emission units subject to the reporting and the procedure requirements of 9 VAC 5-40-50 C and the procedures of 9 VAC 5-50-50 C are listed below:

    a. Municipal Waste Combustor – Emission Units 001-01 and 001-02;
    b. Municipal Waste Combustor – Emission Units 002-01, 002-02; and
    c. Municipal Waste Combustor – Emission Units 003-01 and 003-02.

3. Each owner required to install a continuous monitoring system subject to 9 VAC 5-40-41 or 9 VAC 5-50-410 shall submit a written report of excess emissions (as defined in the applicable emission standard) to the board for every calendar quarter. All quarterly reports shall be postmarked by the 30th day following the end of each calendar quarter and shall include the following information:

   a. The magnitude of excess emissions computed in accordance with 40 CFR 60.13(h) or 9 VAC 5-40-41 B 6, any conversion factors used, and the date and time of commencement and completion of each period of excess emissions;

   b. Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the source. The nature and cause of any malfunction (if known), the corrective action taken or preventative measures adopted;

   c. The date and time identifying each period during which the continuous monitoring system was inoperative except for zero and span checks and the nature of the system repairs or adjustments; and

   d. When no excess emissions have occurred or the continuous monitoring systems have not been inoperative, repaired or adjusted, such information shall be stated in the report.

4. All emission units not subject to 9 VAC 5-40-50 C and 9 VAC 5-50-50 C must make written reports within two weeks of the malfunction occurrence.

(9 VAC 5-20-180 C**,** 9 VAC 5-40-50, and 9 VAC 5-50-50)

G. Severability

The terms of this permit are severable. If any condition, requirement or portion of the permit is held invalid or inapplicable under any circumstance, such invalidity or inapplicability shall not affect or impair the remaining conditions, requirements, or portions of the permit.
(9 VAC 5-80-110 G.1)

H. Duty to Comply

The permittee shall comply with all terms and conditions of this permit. Any permit noncompliance constitutes a violation of the federal Clean Air Act or the Virginia Air Pollution Control Law or both and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or, for denial of a permit renewal application.
(9 VAC 5-80-110 G.2)

I. Need to Halt or Reduce Activity not a Defense

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
(9 VAC 5-80-110 G.3)

J. Permit Action for Cause

1. This permit may be modified, revoked, reopened, and reissued, or terminated for cause as specified in 9 VAC 5-80-110 L, 9 VAC 5-80-240 and 9 VAC 5-80-260. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.
(9 VAC 5-80-110 G.4)

2. Such changes that may require a permit modification and/or revisions include, but are not limited to, the following:

    a. Erection, fabrication, installation, addition, or modification of an emissions unit (which is the source, or part of it, which emits or has the potential to emit any regulated air pollutant), or of a source, where there is, or there is potential of, a resulting emissions increase;

    b. Reconstruction or replacement of any emissions unit or components thereof such that its capital cost exceeds 50% of the cost of a whole new unit;

    c. Any change at a source which causes emission of a pollutant not previously emitted, an increase in emissions, production, throughput, hours of operation, or fuel use greater than those allowed by the permit, or by 9 VAC 5-80-11, unless such an increase in authorized by an emissions cap; or any change at a source which causes an increase in emissions resulting from a reduction in control efficiency, unless such an increase is authorized by an emissions cap;

    d. Any reduction of the height of a stack or of a point of emissions, or the addition of any obstruction which hinders the vertical motion of exhaust;

    e. Any change at the source which affects its compliance with conditions in this permit, including conditions relating to monitoring, recordkeeping, and reporting;

    f. Addition of an emissions unit which qualifies as insignificant by emissions rate (9 VAC 5-80-720 B) or by size or production rate (9 VAC 5-80-720 C);

    g. Any change in insignificant activities, as defined by 9 VAC 5-80-90 D.1.a(1) and 9 VAC 5-80-720 B and 9 VAC 5-80-720 C.

(9 VAC 5-80-110 G, 9 VAC 5-80-110 J, 9 VAC 5-80-240, and 9 VAC 5-80-260)

K. Property Rights

The permit does not convey any property rights of any sort, or any exclusive privilege. (9 VAC 5-80-110 G.5)

L. Duty to Submit Information

1. The permittee shall furnish to the Board, within a reasonable time, any information that the Board may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Board copies of records required to be kept by the permit and, for information claimed to be confidential, the permittee shall furnish such records to the Board along with a claim of confidentiality.
   (9 VAC 5-80-110 G.6)

2. Any document (including reports) required in a permit condition to be submitted to the Board shall contain a certification by a responsible official that meets the requirements of 9 VAC 5-80-80 G.
   (9 VAC 5-80-110 K.1)

M. Duty to Pay Permit Fees

The owner of any source for which a permit under 9 VAC 5-80-50 through 9 VAC 5-80-305 was issued shall pay permit fees consistent with the requirements of 9 VAC 5-80-310 through 9 VAC 5-80-355. The actual emissions covered by the permit program fees for the preceding year shall be calculated by the owner and submitted to the Department by **April 15** of each year. The calculations and final amount of emissions are subject to verification and final determination by the Department.
(9 VAC 5-80-110 H and 9 VAC 5-80-340 C)

N. Fugitive Dust Emission Standards

During the operation of a stationary source or any other building, structure, facility, or installation, no owner or other person shall cause or permit any materials or property to be handled, transported, stored, used, constructed, altered, repaired, or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne. Such reasonable precautions may include, but are not limited to, the following:

1. Use, where possible, of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads, or the clearing of land;

2. Application of asphalt, oil, water, or suitable chemicals on dirt roads, materials stockpiles, and other surfaces which may create airborne dust; the paving of roadways and the maintaining of them in a clean condition;

3. Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty material. Adequate containment methods shall be employed during sandblasting or other similar operations;

4. Open equipment for conveying or transporting material likely to create objectionable air pollution when airborne shall be covered or treated in an equally effective manner at all times when in motion; and,

5. The prompt removal of spilled or tracked dirt or other materials from paved streets and of dried sediments resulting from soil erosion.

(9 VAC 5-40-90 and 9 VAC 5-50-90)

O. Startup, Shutdown, and Malfunction

At all times, including periods of startup, shutdown, soot blowing, and malfunction, owners shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with air pollution control practices for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Board, which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.
(9 VAC 5-50-20)

P. Alternative Operating Scenarios

Contemporaneously with making a change between reasonably anticipated operating scenarios identified in this permit, the permittee shall record in a log at the permitted facility a record of the scenario under which it is operating. The permit shield described in 9 VAC 5-80-140 shall extend to all terms and conditions under each such operating scenario. The terms and conditions of each such alternative scenario shall meet all applicable requirements including the requirements of 9 VAC 5 Chapter 80, Article 1.
(9 VAC 5-80-110 J)

Q. Inspection and Entry Requirements

The permittee shall allow DEQ personnel, upon presentation of credentials and other documents as may be required by law, to perform the following:

1. Enter upon the premises where the source is located or emissions-related activity is conducted, or where records must be kept under the terms and conditions of the permit.

2. Have access to and copy, at reasonable times, any records that must be kept under the terms and conditions of the permit.

3. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit.

4. Sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit or applicable requirements.

(9 VAC 5-80-110 K.2)

R. Reopening For Cause

1. The permit shall be reopened by the Board if additional federal requirements become applicable to a major source with a remaining permit term of three years or more. Such reopening shall be completed no later than 18 months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to 9 VAC 5-80-80 F.

2. The permit shall be reopened if the Board or the administrator determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.

3. The permit shall be reopened if the administrator or the Board determines that the permit must be revised or revoked to assure compliance with the applicable requirements.

4. The permit shall not be reopened by the Board if additional applicable state requirements become applicable to a major source prior to the expiration date established under 9 VAC 5-80-110 D.

(9 VAC 5-80-110 L)

S. Permit Availability

Within five days after receipt of the issued permit, the permittee shall maintain the permit on the premises for which the permit has been issued and shall make the permit immediately available to DEQ upon request.
(9 VAC 5-80-150 E)

T. Transfer of Permits

1. No person shall transfer a permit from one location to another, unless authorized under 9 VAC 5-80-130, or from one piece of equipment to another.
(9 VAC 5-80-160)

2. In the case of a transfer of ownership of a stationary source, the new owner shall comply with any current permit issued to the previous owner. The new owner shall notify the Board of the change in ownership within 30 days of the transfer and shall comply with the requirements of 9 VAC 5-80-200.
(9 VAC 5-80-160)

3. In the case of a name change of a stationary source, the owner shall comply with any current permit issued under the previous source name. The owner shall notify the Board of the change in source name within 30 days of the name change and shall comply with the requirements of 9 VAC 5-80-200.
(9 VAC 5-80-160)

U. Malfunction as an Affirmative Defense

1. A malfunction constitutes an affirmative defense to an action brought for noncompliance with technology-based emission limitations if the requirements of paragraph 2 of this condition are met.

2. The affirmative defense of malfunction shall be demonstrated by the permittee through properly signed, contemporaneous operating logs, or other relevant evidence that show the following:

   a. A malfunction occurred and the permittee can identify the cause or causes of the malfunction.

   b. The permitted facility was at the time being properly operated.

   c. During the period of the malfunction the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the permit.

   d. The permittee notified the board of the malfunction within two working days following the time when the emission limitations were exceeded due to the

malfunction. This notification shall include a description of the malfunction, any steps taken to mitigate emissions, and corrective actions taken. The notification may be delivered either orally or in writing. The notification may be delivered by electronic mail, facsimile transmission, telephone, or any other method that allows the permittee to comply with the deadline. This notification fulfills the requirements of 9 VAC 5-80-110 F 2 b to report promptly deviations from permit requirements. This notification does not release the permittee from the malfunction reporting requirement under 9 VAC 5-20-180 C.

3. In any enforcement proceeding, the permittee seeking to establish the occurrence of a malfunction shall have the burden of proof. The provisions of this section are in addition to any malfunction, emergency or upset provision contained in any requirement applicable to the source.

4. The provisions of this section are in addition to any malfunction, emergency or upset provision contained in any applicable requirement.

(9 VAC 5-80-250)

V. Permit Revocation or Termination for Cause

A permit may be revoked or terminated prior to its expiration date if the owner knowingly makes material misstatements in the permit application or any amendments thereto or if the permittee violates, fails, neglects or refuses to comply with the terms or conditions of the permit, any applicable requirements, or the applicable provisions of 9 VAC 5 Chapter 80 Article 1. The Board may suspend, under such conditions and for such period of time as the Board may prescribe, any permit for any of the grounds for revocation or termination or for any other violations of these regulations.
(9 VAC 5-80-260)

W. Duty to Supplement or Correct Application

Any applicant who fails to submit any relevant facts or who has submitted incorrect information in a permit application shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary facts or corrections. An applicant shall also provide additional information as necessary to address any

requirements that become applicable to the source after the date a complete application was filed but prior to release of a draft permit.
(9 VAC 5-80-80 E)

X. Stratospheric Ozone Protection

If the permittee handles or emits one or more Class I or II substances subject to a standard promulgated under or established by Title VI (Stratospheric Ozone Protection) of the federal Clean Air Act, the permittee shall comply with all applicable sections of 40 CFR Part 82, Subparts A to F.
(40 CFR Part 82, Subparts A-F)

Y. Accidental Release Prevention

If the permittee has more, or will have more than a threshold quantity of a regulated substance in a process, as determined by 40 CFR 68.115, the permittee shall comply with the requirements of 40 CFR Part 68.
(40 CFR Part 68)

Z. Changes to Permits for Emissions Trading

No permit revision shall be required under any federally approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are provided for in this permit.
(9 VAC 5-80-110 I)

AA. Emissions Trading

Where the trading of emissions increases and decreases within the permitted facility is to occur within the context of this permit and to the extent that the regulations provide for trading such increases and decreases without a case-by-case approval of each emissions trade:

a. All terms and conditions required under 9 VAC 5-80-110, except subsection N, shall be included to determine compliance.

b. The permit shield described in 9 VAC 5-80-140 shall extend to all terms and conditions that allow such increases and decreases in emissions.

c. The owner shall meet all applicable requirements including the requirements of 9 VAC 5-80-50 through 9 VAC 5-80-300.

(9 VAC 5-80-110 I)